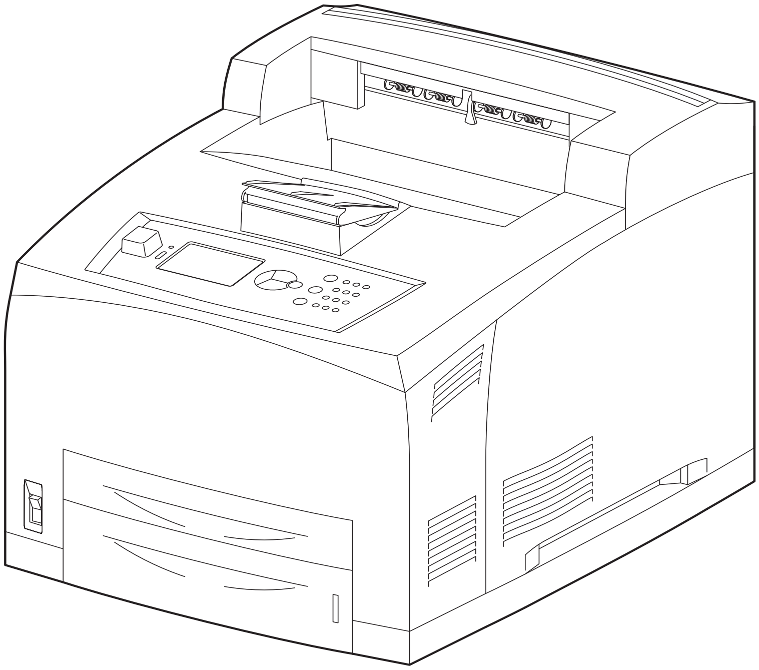
B710 / B720 / B730

Laser Printer
Service Manual



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1. Introduction

This manual provides the information necessary to service the B710/B720/B730 printers. Information regarding the specifications of the product is not included in this document and can be found in the B710/B720/B730 Product Specifications document. Information about how to use these printers can be found in the B710/B720/B730 User's Guide.

1.1 Marks giving caution

Maintenance operations requiring special cautions or additional information to descriptions of this manual are presented as "Warning", "Caution", or "Note", according to their nature.

WARNING

If instructions are not observed, death or serious injury may be caused.

CAUTION

If instructions are not observed, injuries of workers or physical damages to assets (including this laser printer) may result.

NOTE

Particularly important essentials for procedures, steps, rules, and others.

1.2 Safety

To prevent possible accidents during maintenance operation, you should strictly observe the “Warning” and “Caution” information in this manual.

Dangerous operations and operations out of range of this manual should be absolutely avoided. Generally various processes not covered by this manual may be required in actual operation, which should be performed carefully while always giving attention to safety.

1.2.1 Power source

Keep the power supply off during maintenance operation to prevent electric shock, burns and other damages. Keep the power plug disconnected during the maintenance operation.

If the power supply should be kept connected for measurement of voltage or other similar reasons, sufficient care should be given to prevent electric shock, by following the procedures of this manual.

WARNING

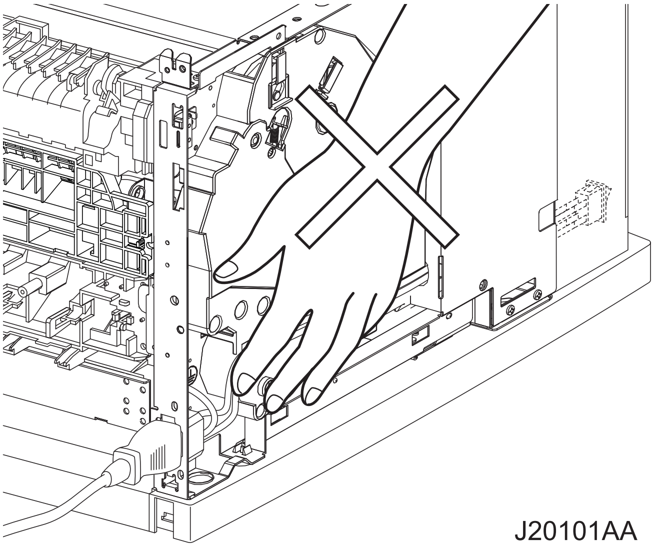
While the printer is ON, never touch live parts if not absolutely required.

WARNING

Power is supplied to the power switch / inlet (LVPS ASSY) even while the printer is off. Never touch its live components.

WARNING

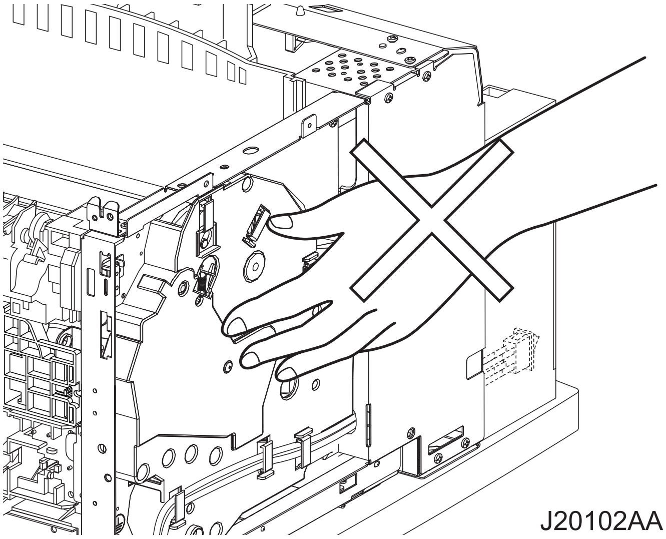
Do not touch live parts unless otherwise specified.



1.2.2 Driving units

When servicing gears or other driving units, be sure to turn the printer OFF and unplug it. Drive them manually when required.

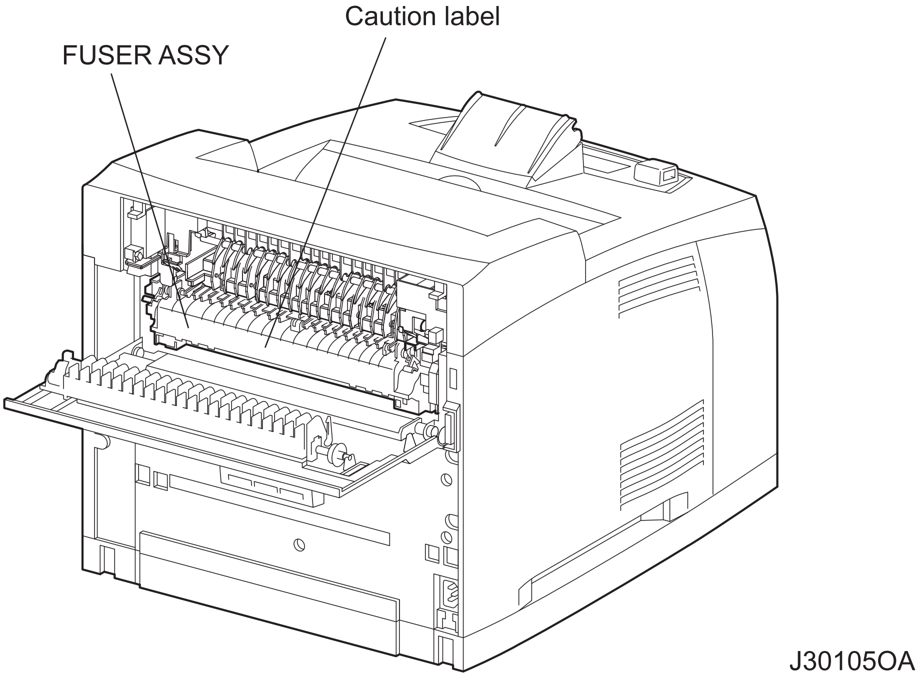
WARNING **_Never touch the gears or other driving units while the printer is running._**



1.2.3 High-temperature units

When servicing high-temperature units (securing unit, etc.), be sure to turn the printer OFF to prevent burns, injuries and other troubles, remove the power plug and begin the service processes after they have cooled down enough.

WARNING **_Immediately after completion of operation, they are still hot. Start services after more than 30 minutes._**



1.2.4 Laser beams

This laser printer has a switch (INTERLOCK S/W 5V) which stops providing power to the laser beam output circuit in order to prevent receiving the laser beam from the output unit (ROS ASSY). The switch turns to OFF when the top cover is opened.

Do not turn the switch ON by force except in usual operations because there are possibilities that the laser beam may emit light when maintaining.

WARNING

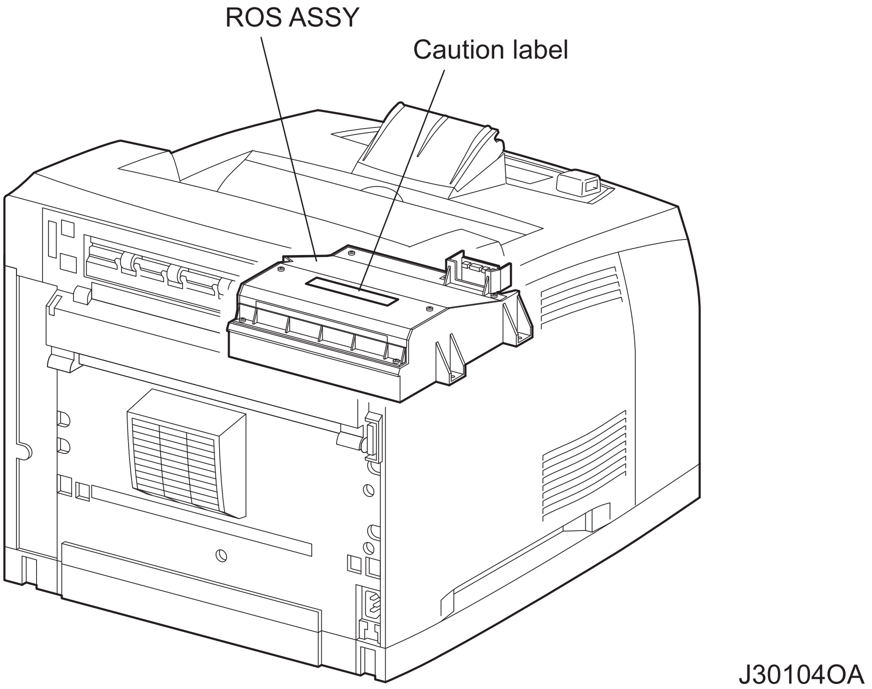
- ***If your eyes are exposed to laser beams, you may lose your eyesight.***
- ***Never open the cover if warning label for laser beams is attached there.***
- ***Before disassembling and reassembling this laser printer, be sure to turn it OFF.***
- ***When servicing this laser printer while it is running, be sure to follow the procedures specified in this manual.***
- ***You should understand the features of the laser beams which are capable of having an injurious action on the human body. Do not extend this danger over workers as well as other people around the printer.***

NOTE

Laser beams have features as follows:

- **Frequencies are smaller in width than other beams (sun and electric bulbs) and phases are uniform so that high monochromatic and convergence performance can be obtained and thin beams of light can reach places at a long distance.**
- **Due to the high convergence, beams are concentrated in high density and high temperature, which is dangerous to the human body.**

Reference: Laser beams of this laser printer are invisible rays which you cannot see.

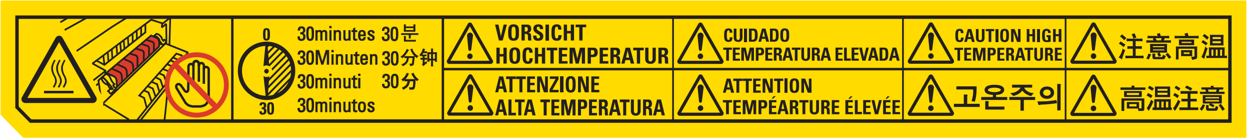


1.3 Warning/caution labels

Warning labels and caution labels are attached to this laser printer to prevent accidents. Check those labels for peeling or staining when servicing the printer.

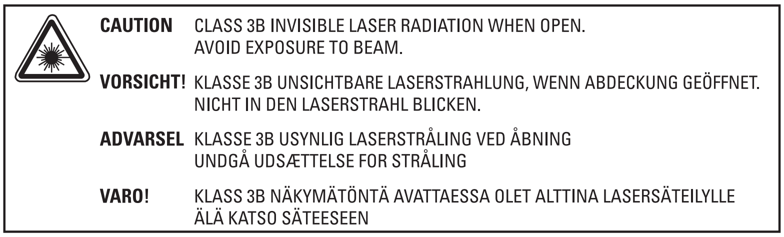
1.3.1 Caution label for high-temperature units

It is attached to the front side of the fuser (FUSER ASSY) which may become hot, in order to prevent a burn.


0
30
30minutes 30분
30Minuten 30分钟
30minuti 30分
30minutos
VORSICHT
HOCHTEMPERATUR
ATTENZIONE
ALTA TEMPERATURA
CUIDADO
TEMPERATURA ELEVADA
ATTENTION
TEMPÉARTURE ÉLEVÉE
CAUTION HIGH
TEMPERATURE
고온주의
注意高温
高温注意

1.3.2 Caution label for laser beams

It is attached to the top side of the output unit of the laser beam assembly (ROS ASSY) in order to prevent a maintenance worker from receiving the laser beam.



CAUTION CLASS 3B INVISIBLE LASER RADIATION WHEN OPEN.
AVOID EXPOSURE TO BEAM.

VORSICHT! KLASSE 3B UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET.
NICHT IN DEN LASERSTRAHL BLICKEN.

ADVARSEL KLASSE 3B USYNLIG LASERSTRÅLING VED ÅBNING
UNDGÅ UDSÆTTELSE FOR STRÅLING

VARO! KLASS 3B NÄKYMÄTÖNTÄ AVATTAESSA OLET ALTTINA LASERSÄTEILYLLE
ÄLÄ KATSO SÄTEESEEN

1.4 Installation

1.4.1 Power Source

Do not plug too many leads into a single socket. Use a dedicated electric outlet and confirm that the power is within the specification.

WARNING

Connect the single power cord to an electric outlet which supplies power more than the maximum power consumption of this laser printer.

1.4.2 Ground

Be sure to establish the ground of this laser printer.

WARNING

Be sure to connect the ground of this laser printer with one of the followings:

- ***Grounding terminal of an electric outlet***
- ***Copper or the like which is embedded 650 mm or deeper in the ground***
- ***Grounding terminal for which the grounding work has been carried out***

WARNING

Be sure not to establish a ground with the followings:

- ***Gas pipe***
- ***Ground for telephone***
- ***Water pipe which is partially made from plastic***

WARNING

When establishing a ground, be sure not to use the 2pin-to-3pin converter plug.

1.4.3 Installation location

- Obtain a necessary space for operations of this laser printer.
- Install where the temperature and the humidity meet the following environment:
- During operation: 5 to 35°C / 15 to 85% RH (70% RH at 35°C, 85%RH at 32°C) No condensation
- Not in operation: -20 to 40°C / 5 to 85% Relative Humidity (A place with no condensation)
- Install in a flat place with the angle of gradient of 5 degree or less.
- Install in a place with the illumination of 3000 Lux or less. (Avoid direct sunlight.)
- Avoid a place near a water system, a humidifier or fire, a dusty place, or a place which gets excessive air flow from air conditioning.
- Avoid where volatile or flammable gas is generated.
- Avoid a poorly ventilated place.
- Avoid an unstable and non-durable place.

1.5 Unpacking

1.5.1 Unpacking laser printer

CAUTION **The printer must be carried horizontally with two or more persons.**

CAUTION **Extreme care must be taken to avoid personal injuries.**

Unpack the carton, and confirm that the contents and their appearances have no problem.

1) Laser Printer main unit
    150 Paper Cassette
    550 Paper Cassette
2) EP CARTRIDGE
3) Power Cord
4) Instruction Manual
5) Face Up Tray

1.6 Installation Procedures

1.6.1 Installing laser printer

For details, refer to the Instruction Manual supplied with the main unit.

CAUTION **When holding up the laser printer, be sure to grasp the handles with both hands. Grasping a part other than the handles may result in a fall or damage of the laser printer.**

CAUTION When holding up the laser printer, bend your knees thoroughly to prevent lower back strain.

CAUTION The protection sheets and the fixing materials, which are removed before the installation, are re-used when the laser printer is moved to another place. Be sure to keep them.

1) Unpack the printer, and place it in an installation location after removing the cushioning materials.
2) Confirm the attachments.
3) Peel off fixing tapes applied to the laser printer.
4) Unpack the EP CARTRIDGE, then be sure to shake it seven to eight times holding both sides.

NOTE **When removing the toner seal, draw it out straight and horizontally. After the removal, be careful not to shake or give a shock to the EP CARTRIDGE.**

5) Open the COVER OPEN, and install the EP CARTRIDGE.
6) Close the COVER OPEN.
7) Draw the paper tray, and press down the PLATE ASSY BTM to lock.
8) Place paper into the paper tray.

NOTE **When placing paper into the paper tray, be careful of the followings:**

- Align the four corners of the paper into place.
- Adjust the paper guide to the paper size.
- Do not place paper over the capacity or over the upper-limit line of the paper tray.

9) Push the paper tray into the laser printer to install.
10) Connect the power cord.
11) Turn on the power switch of the laser printer.
12) Try some test printings with each paper-feed trays to confirm that there is no problem.

1.6.2 Installing Option Face Up Tray

For details, refer to the Instruction Manual supplied with the main unit.

CAUTION **Before the installation, turn off the power and unplug the power cord.**

1) Unpack the Option Face Up Tray, remove cushioning materials, and confirm the attachments.
2) Insert the front edge of the Option Face Up Tray into the slot on the upper-rear of the laser printer to install.
3) Connect the power cord.
4) Turn on the power switch of the laser printer.
5) Try some test printings to eject onto the Option Face Up Tray and confirm that there is no problem.

1.7 Dismantlement procedure

1.7.1 Dismantling the Printer and Options

For details, refer to the Instruction Manual or Chapter 3 Removal and Replacement Procedures.

Perform the dismantlement in the reverse procedures of the installation.

CAUTION **When holding up the laser printer, be sure to grasp the handles with both hands. Grasping a part other than the handles might result in a fall or damage of the printer.**

CAUTION **When holding up the printer, bend your knees thoroughly to prevent lower back strain.**

NOTE **Be sure to remove the EP CARTRIDGE from the printer and put it into a plastic bag.**

NOTE **Be sure to re-use the protection sheets and fixing materials, which were removed at the installation.**

NOTE **Confirm that no attachment is missing.**

NOTE **Be sure to use the cushioning materials properly.**

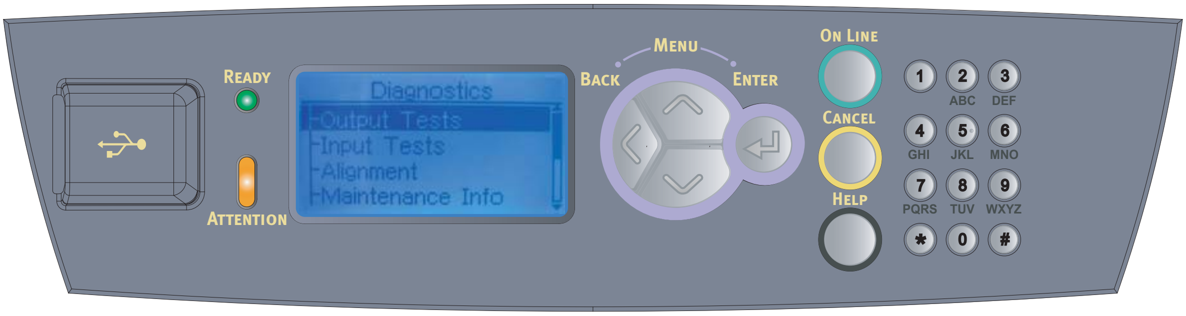
2. Diagnostics

2.1 Overview

Diagnostics enable you to run various test on printer components. You can run motors forward and reverse and at different speeds, the actuation and de-actuation of sensors or switches, energize and de-energize solenoids, clutches, etc. In addition, you can perform tray alignment routines, reset maintenance counters, set the serial number and asset tag, test the operator panel and run test prints.

To enter Diagnostics, perform the following:

1. Switch the printer power OFF,
2. Press and holding the <Menu> and <Enter> keys on the Operator Panel
3. Switch the printer power ON, (*you may release the keys as soon as "Loading..."is displayed*.



In diagnostic mode, a technician can execute various diagnostic commands and can set various operating parameters which effect the operation of the printer. The following menu items are available in diagnostic mode. These are intended for use by a qualified technical support Engineer.

2.2 Navigating through the Diagnostic Menus

Four buttons are used to navigate through the diagnostic menus and sub-menus, (**Menu/Up**, **Enter**, **Back**, and **Arrow Down**). From the initial menu selection "Output Tests", pressing the "**Arrow Down**" button moves down the menu to "Input Tests" then to "Alignment" and so on. Pressing "**Menu/Up**" moves up through the menu.

With the desired menu displayed, pressing "**Enter**" activates that menu. Any sub-menu items may be accessed by using the "**Back**" or "**Menu/Up**" buttons. If the selected menu has no sub-menus, pressing "**Enter**" will ask you to "Execute" the test. If the test is a motor, the motor will run. If the test is a solenoid, the solenoid will energize.

If the selected menu has a sub-menu, use the "**Arrow Down**" or "**Menu/Up**" buttons to move down or up through the menu selections. When the desired menu is displayed, press "**Enter**" to activate the menu. In some cases the sub-menu may be a value. Use the "**Arrow Down**" and/or "**Menu/Up**" buttons to change the value and the "**Enter**" button to lock in the new value.

Use the "**Back**" button to back out of sub-menus to the next higher level. Pressing the "**Cancel**" button will return you to the Ready condition

2.3 Diagnostics Top Level Menu Structure

1. Output Tests
2. Input Tests
3. Alignment
4. Maintenance Info
5. Operator Panel
6. Test Print
7. Flash Summary
8. Print Summary

2.3.1 Output Tests

Output Tests is the first selectable item in the list. The items in this list allows the technician to exercise various mechanical elements within the print engine. The complete Output Tests menu is listed below. None of the menu selections in the Output Tests have sub-menus. Pressing "**Enter**" key to execute the selected function will run the menu item currently displayed. Press "**Cancel**" once to abort the test. These tests are verified by audible sounds. Pressing "**Cancel**" a second time will exit Diagnostics and return you to "Ready/ On Line" condition.

2.3.1.1 Output Tests Menu Structure

- Solenoid Tray1	Execute
- Solenoid Tray2	Execute
- Solenoid Tray3	Execute
- Solenoid Tray4	Execute
- Fan Motor Stop	Execute
- Regi Clutch	Execute
- Main Motor On	Execute
- Duplex Motor Lo	Execute
- Duplex Motor Hi	Execute
- Exit Motor Fwd L	Execute
- Exit Motor Rev L	Execute
- Exit Motor Rev H	Execute
- ROS Motor On	Execute
- Offset Tray Step	Execute
- OCT Offset	Execute
- Roll Chg AC	Execute
- Roll Chg DC	Execute
- Dev Bias AC	Execute
- DEV Bias DC	Execute
- TR Roll Neg	Execute
- TR Roll Pos	Execute
- Detack	Execute
- Fan Fast	Execute
- Motor Tray3	Execute
- Motor Tray4	Execute
- T3 Feed Roll Chg	Execute
- T4 Feed Roll Chg	Execute
- Laser Diode	Execute
- DC Roll Bias Pos	Execute
- DC Roll Bias Neg	Execute

2.3.2 Input Tests

Input tests are used to test cover interlocks, paper path sensors, paper size switches, fuser temperature, ROM Checksum. With “Input Tests” displayed on the LCD, pressing the “**Enter**” button will enter the “Input Tests” menu and display the first menu selection (Sensor Test). Pressing the “**Enter**” button again will enable the sensor test. Pressing “**Back**” button halts the test and returns you to the previous menu option.

The Input test allows you to test the three various input feedback from sensing elements within the Print engine.

2.3.2.1 Input Tests Menu Structure

- Sensor Test	Execute
- Fuser Temp Read	Execute
- ROM Checksum	Execute

- Sensor Test

This will return a Hexadecimal value which indicates the input sensor status.
This will vary from Printer to Printer. The value returned for this demo was “0000H”.

- Fuser Temp Read

This will return a Hexadecimal value which indicates the Fuser temperature.
This will vary from Printer to Printer. The value returned for this demo was “017DH”.

- ROM Checksum

This will return a Hexadecimal value which indicates the engine firmware checksum.
This will vary from Printer to Printer. The value returned for this demo was “0430H”

2.3.3 Alignment

The image registration alignment allows each tray to be adjusted independently. Alignment routines are used to set “X” and “Y” values for the paper trays 1~4 and the Duplexer. These numeric values can be changed from 0 ~ 15, (* Value = 8) asterisk indicates the current setting.

With “Alignment” displayed on the LCD, pressing the “**Enter**” button will enter the “Alignment” menu and display the first menu selection (Tray1 Y Adjust). Pressing the “**Enter**” button again will enable the “Tray1 Y Adjust”. Pressing “**Arrow Down**” or “**Menu/Up**” will increase or decrease the current setting. Press “**Enter**” to accept the new value or “**Back**” to return to the Previous menu without change.

Example: If changing the default value for “Tray 1 Y Adjust” to a higher number would shift the printed image down towards the bottom edge of the page, conversely if a lower number value is selected, the printed image would be shifted towards the top edge of the page

If changing the default value for “Tray 1 X Adjust” to a higher number would shift the printed image towards the right edge of the page, conversely if a lower number value is selected then the printed image would be shifted to the left of the page.

After changes have been made, you may also choose to print the “Grid Page” from the “Test Print” section in order to verify that your changes for new “X Y” correction values had the desired effect, without having to leave Diagnostic mode. (*See:* Test Print 2.3.6)

2.3.3.1 Alignment Menu Structure

- Tray1 Y Adjust	* Value = 8
- Tray2 Y Adjust	* Value = 8
- Tray3 Y Adjust	* Value = 8
- Tray4 Y Adjust	* Value = 8
- Duplex1 Y Adjust	* Value = 8
- Tray1 X Adjust	* Value = 8
- Tray2 X Adjust	* Value = 8
- Tray3 X Adjust	* Value = 8
- Tray4 X Adjust	* Value = 8
- Duplex1 X Adjust	* Value = 8

2.3.4 Maintenance Info

This allows the Technician to effect changes to various counters and stored values within the NVRAM of the Print engine.With “Maintenance Info” displayed on the LCD, pressing the “**Enter**” button will enter the Maintenance Info menu and display the first menu selection.

2.3.4.1 Maintenance Info Menu Structure

- Reset Maint Reqd	Execute
- Image Counter	displays the image count registered in the toner cartridge
- Toner Page Count	displays the toner page count registered in the toner cartridge
- Serial Number	displays the serial number value “ABCD12345” and allows change.
- Asset Tag	Execute
- Reset Usage Ctr	Execute
- Reset Error Log	Execute
- Save NV File	Execute
- Restore NV File	Execute
- Clear NV Content	Execute
- Reset Net PWD	Execute
- Reset PJA PWD	Execute
- Reset Panel PWD	Execute
- Power Save	Enable / Disable
- Email Log	On/Off
- CU Version	displays the Controller Unit version number
- PU Version	displays the Printer Unit version number

- Reset Maint Read

Resets the Maintenance Required condition indicating that a Maintenance Kit to be installed.

Pressing “**Enter**” resets the Maintenance counter to “0”. This is reset when new Maintenance Kit is installed.

- Image Counter

Displays the total number of impressions printed during the life of the product. This number is generated by the HVPS/MCU PWBA.

Pressing “**Enter**” will enter the image counter menu and display the total number of impressions produced by the printer.

- Toner Page Count

Displays the number of pages that have been printed on the current toner cartridge. This number is generated by the HVPS/MCU PWBA.

Pressing “**Enter**” will enter the toner page count menu and display the number of pages printed on the current toner cartridge.

- Serial Number

Displays the Serial Number of the printer set at the factory.

Pressing “**Enter**” will enter the Serial Number menu. The menu will display the Serial Number set at the factory and will allow the entering of up to a 16 digit serial number. If no number has previously been entered, the second line of the display will be blank with a line at the bottom of the first digit position.

Using the “**Arrow Down**” or “**Menu/Up**” buttons scroll through the possible choices that can be entered in each digit location. The choices are: ! “ # $ % & ' ( ) * + , -. / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [\ ] ^ _ ` a b c d e f g h I j k l m n o p q r s t u v w x y z { | } ~

When the desired entry is displayed in the first location, press “**Enter**” Pressing “**Enter**” makes the next position active. Repeat the procedure above to enter all digits necessary.

You may enter up to 16 characters.

- Asset Tag

Displays an Asset Tag Number, this is defined by the User.

Pressing “**Enter**” will enter the Asset Tag menu. The menu will allow the entering of up to a 16 digit number. If no number has previously been entered, the second line of the display will be blank with a line at the bottom of the first digit position.

Using the “**Arrow Down**” or “**Menu/Up**” buttons scroll through the possible choices that can be entered in each digit location. The choices are: ! " # $ % & ' ( ) * + , -. / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [\ ] ^ _ ` a b c d e f g h I j k l m n o p q r s t u v w x y z { | } ~

When the desired entry is displayed in the first location, press “**Enter**”. Pressing “**Enter**” makes the next position active. Repeat the procedure above to enter all digits necessary.

You may enter up to 16 characters.

- Reset Usage Ctr

Allows you to reset the counter that calculates the amount of imaging that has been accumulated.

Pressing “**Enter**” will enter the rest usage ctr submenu and display “**Execute**”.

Pressing “**Enter**” button will reset the Usage Ctr.

Pressing the “**Back**” button will cancel the routine.

- Reset Error Log

Resets the Printer Controller Error Log which records various events (misfeed errors, service errors, paper jams). Resetting the error log erases all events recorded in the log.

Pressing “**Enter**” will enter the reset error log submenu and display “**Execute**” Pressing “**Enter**” button will reset the Error Log.

Pressing the “**Back**” button will cancel the routine.

- Save NV File

Saves the controller Non-Volatile memory file. Pressing “**Enter**” button will save the NV File and return the printer to Ready.

- Restore NV File

Restores the controller Non-Volatile memory file. Pressing “**Enter**” button will save restore the NV File, the printer will display “Resetting” and reboot to Ready.

- Clear NV Content

Clears all controller NV content and sets NV to factory default condition. Pressing “**Enter**” button will save clear the NV File, the printer will display “Resetting” and reboot to Ready.

- Reset Net PWD

Resets the Net password. To “execute” press “**Enter**”. After pressing “**Enter**” you will automatically be returned to the previous menu. The default password will be reset to “**aaaaaa**”.

- Reset PJA PWD

Resets the Print Job Administration password. To “execute” press “**Enter**”. After pressing **“Enter”** you will automatically be returned to the previous menu. The default password will be reset to “**aaaaaa**”.

- Reset Panel PWD

Resets the Front Panel password. To “execute” press “**Enter**”. After pressing “**Enter**” you will automatically be returned to the previous menu. The default password will be reset to **“aaaaaa”**.

- Power Save

Enables or disables the Power Saver mode. This function allows specific users to defeat the normal Power Save feature. “**Power Save**” has an “Enable” or “Disable” value setting, the default setting is “* Enable “. Pressing “**Arrow Down**” or “**Menu/Up**” will highlight the desired setting. Press the “**Enter**” button to select the highlighted option. Press the “**Back**” button to return to the previous Menu options.

- Email Log

The default value for this option is “OFF”. by turning this feature “ON” allows the printer to generate an error log that tracks e-mail error reports that were not sent properly.

- CU Version

This option will display the Controller Unit version number

- PU Version

This option will display the Printer Unit version number

2.3.5 Operator Panel

The Operator Panel menu enables the running of tests on Operator Panel. These tests exercise the functionality of the LEDs, the LCD, and the Keys (buttons). With “Operator Panel” displayed on the LCD, pressing the “**Enter**” button will enter the Operator Panel menu and display the first menu selection.

2.3.5.1 Operator Panel Menu Structure

- LED Test	Execute
- LCD Test	Execute
- Key Test	Execute

- LED Test

The LED Test is used to test the LED’s. With LED Test displayed, press the “**Enter**” button will “Execute” the LED test.

- LCD Test

The LCD Test is used to test the segments of the LCD display. With LCD Test displayed, pressing the “**Enter**” button to “Execute” the LCD test. A list of display fonts that can be scrolled through by using the “**Arrow Down**” or “**Menu/Up**” buttons. Press the “Back” button to return to the previous menu.

- Key Test

The Key Test is used to test the mechanical function of the Keys on the Operator panel.With Key Test displayed, pressing the “**Enter**” button to “Execute” the key test. By pressing individual keys. The LCD will display the equivalent character assignment for that key being pressed. To exit this mode, press the “Back” key.

2.3.6 Test Print

The Test Print Menu enables the running of five test prints, selecting the tray for the source paper, and selecting duplex or simplex. With “Test Print” displayed on the LCD, pressing the “**Enter**” button will enter the Test print menu and display the first menu selection.

2.3.6.1 Test Print Menu Structure

- Paper Feed	Select Tray 1 ~ 4 / (* Tray 1) asterisk indicates the current setting.
- Duplex	On/Off
- Engine Test Page	Execute
- Grid Page	Execute
- Blank Page	Execute
- Black Page	Execute
- Test Pages	Execute

- Paper Feed

With Test Print displayed on the LCD, pressing the “**Enter**” button will display the current default tray. The default tray is the tray that will be used to print any of the test pages below. The tray choices for this menu are:

Tray 1
Tray 2
Tray 3
Tray 4

Use the “**Arrow Down**” or “**Menu/Up**” buttons to scroll through the choices. With the desired tray displayed, press “**Enter**” to save your choice and return to the Test Print menu

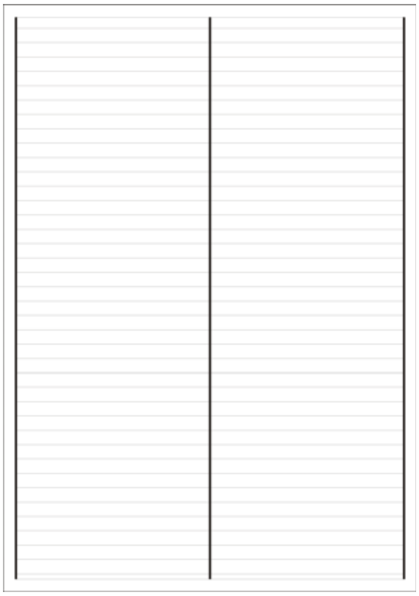
- Duplex

With “Duplex” displayed on the LCD, pressing the “**Enter**” button will enter the duplex menu and display the current setting. If duplex is set to ON, all test prints will print on both sides. If duplex is set to OFF, all test prints will be printed in the simplex mode. The choices for this menu are ON and OFF. se the “**Arrow Down**” or “**Menu/Up**” buttons to toggle between ON and OFF. With the desired choice displayed, press “**Enter**” to save your choice and return to the Test Print Menu.

- Engine Test Page

The Engine Test Page is used for checking the functionality of various print engine components.

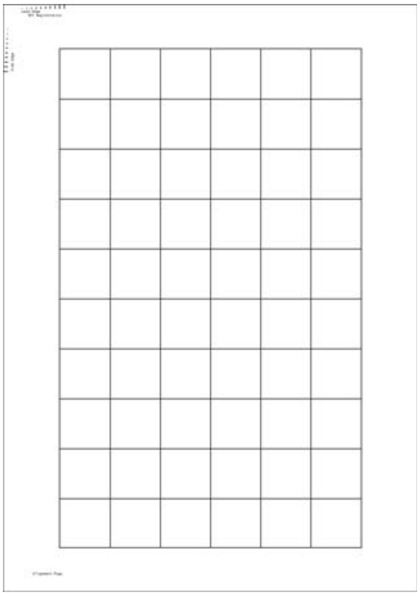
With “Engine Test Page” displayed on the LCD, pressing the “**Enter**” button will print the Engine Test Page.



- Grid Page

The Grid Page is used for registration adjustments and skew measurement.

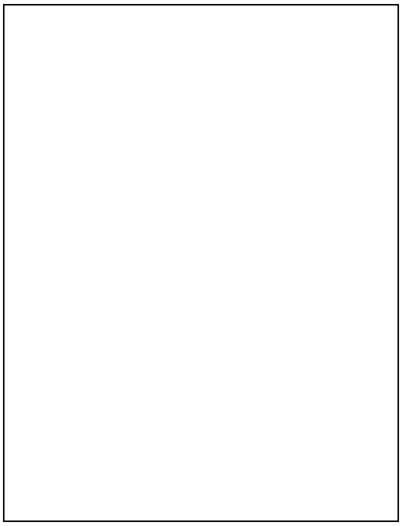
With “Grid Page” displayed on the LCD, pressing the “**Enter”** button will print the Grid Page.



- Blank Page

The Blank Page is used for print quality checks for spots and back ground.

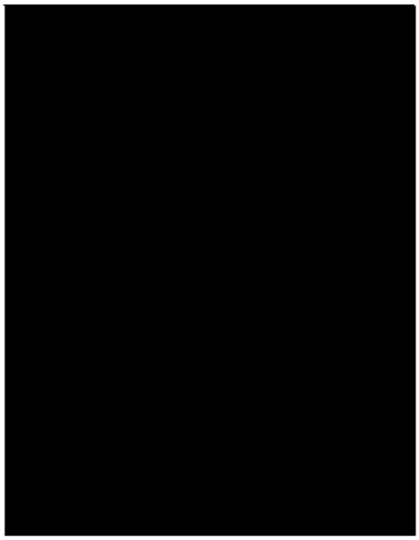
The blank page is used for With “Blank Page” displayed on the LCD, pressing the “**Enter**” button will print a Blank Page.



- Black Page

The Black Page is used for light streaks and other print quality defects.

With “Black Page” displayed on the LCD, pressing the “**Enter**” button will print a page with a large black square.



- Test Page

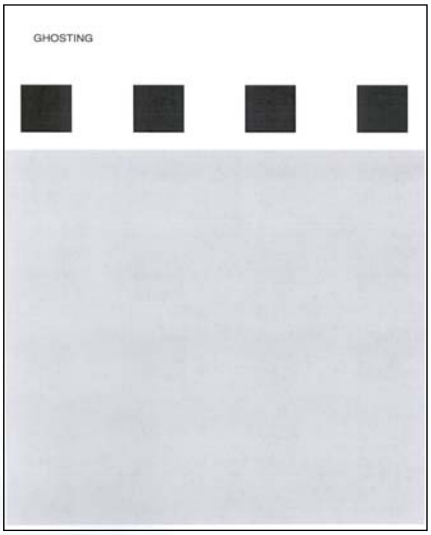
The Test Pages are used for line, text, solid area coverage, and resolution quality.

With "Test Page" displayed on the LCD, pressing the "**Enter**" button will execute the following print Test Pages.

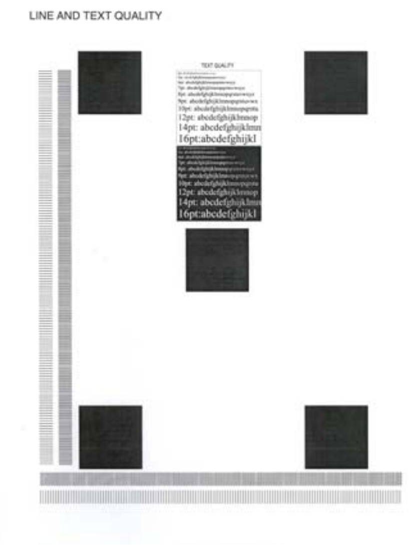
Test Page 1

20 PERCENT GRAY

Test Page 2



Test Page 3



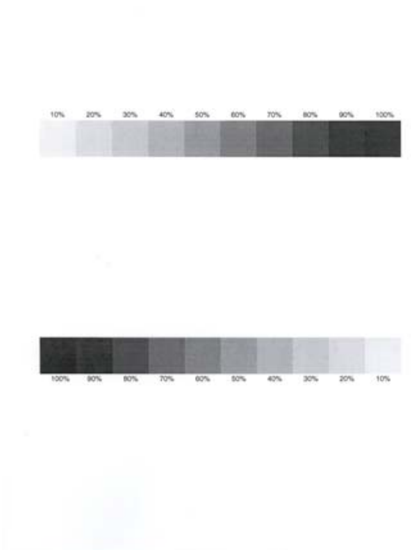
LINE AND TEXT QUALITY

TEXT QUALITY

12pt: abcdefghijklmnop
14pt: abcdefghijklmn
16pt:abcdefghijkl

12pt: abcdefghijklmnop
14pt: abcdefghijklmn
16pt:abcdefghijkl

Test Page 4

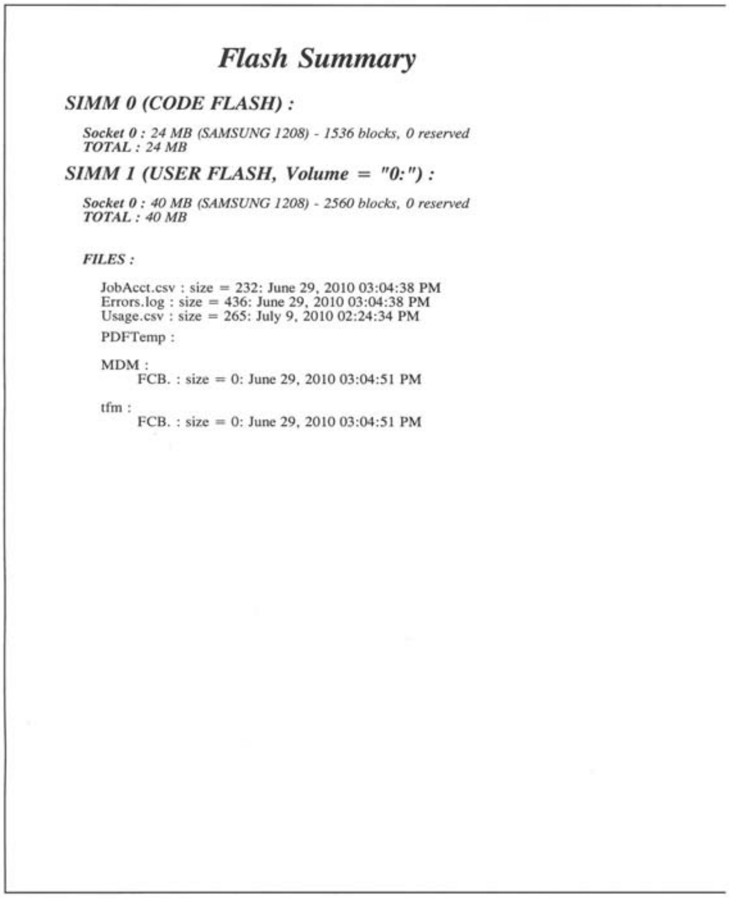


10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

100% 90% 80% 70% 60% 50% 40% 30% 20% 10%

2.3.7 Flash Summary

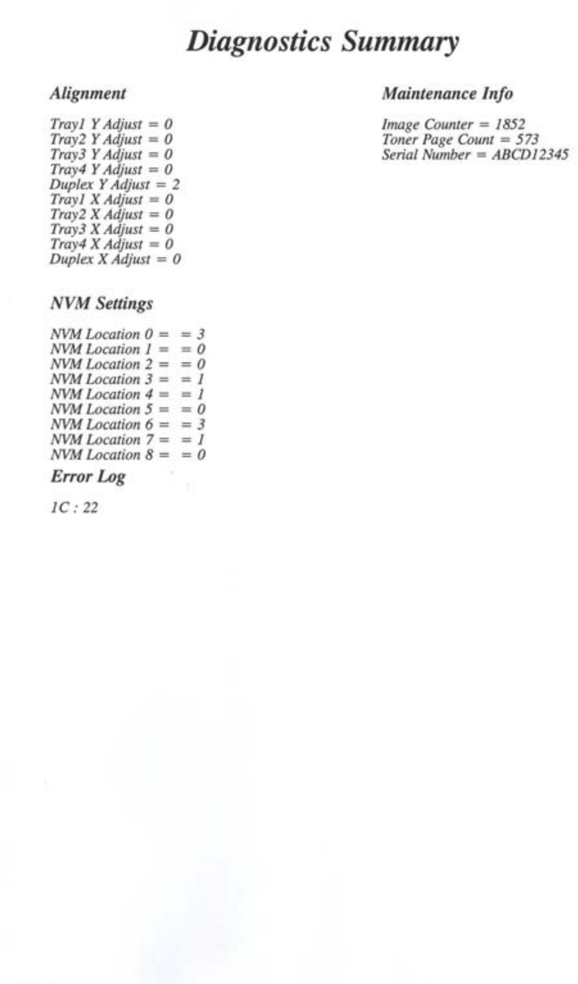
This routine will print a Flash Summary page. The Summary indicates the quantity of SIMM (Code Flash and User Flash) installed on the Controller and any files currently stored in User Flash. With “Flash Summary” displayed on the LCD, pressing the “**Enter**” button will print the Flash Summary (shown below). When the print completes, the display will return to the previous Menu.



```
Flash Summary

SIMM 0 (CODE FLASH) :

   Socket 0 : 24 MB (SAMSUNG 1208) - 1536 blocks, 0 reserved
   TOTAL : 24 MB
SIMM 1 (USER FLASH, Volume = "0:") :

   Socket 0 : 40 MB (SAMSUNG 1208) - 2560 blocks, 0 reserved
   TOTAL : 40 MB


   FILES :

      JobAcct.csv : size = 232: June 29, 2010 03:04:38 PM
      Errors.log : size = 436: June 29, 2010 03:04:38 PM
      Usage.csv : size = 265: July 9, 2010 02:24:34 PM
      PDFTemp :

      MDM :
            FCB. : size = 0: June 29, 2010 03:04:51 PM

      tfm :
            FCB. : size = 0: June 29, 2010 03:04:51 PM
```

2.3.8 Print Summary

This option will print a Diagnostics Summary page. The Summary indicates the current Alignment settings, Image Counter count, Toner Page Count, Serial Number and Error Log. With “Print Summary” displayed on the LCD, pressing the “**Enter**” button to execute the Diagnostics Summary (shown below). When the print completes, the display will return to the previous Menu.



Diagnostics Summary

Alignment

Tray1 Y Adjust = 0
Tray2 Y Adjust = 0
Tray3 Y Adjust = 0
Tray4 Y Adjust = 0
Duplex Y Adjust = 2
Tray1 X Adjust = 0
Tray2 X Adjust = 0
Tray3 X Adjust = 0
Tray4 X Adjust = 0
Duplex X Adjust = 0

NVM Settings

NVM Location 0 = = 3
NVM Location 1 = = 0
NVM Location 2 = = 0
NVM Location 3 = = 1
NVM Location 4 = = 1
NVM Location 5 = = 0
NVM Location 6 = = 3
NVM Location 7 = = 1
NVM Location 8 = = 0

Error Log

1C : 22

Maintenance Info

Image Counter = 1852
Toner Page Count = 573
Serial Number = ABCD12345

2.4 Controller Firmware Download

The printer controller firmware is stored in flash memory on the main controller PWB. The controller supports a “Firmware Download” feature to accommodate easy loading of new versions of firmware. There is a single flash component on the board which has 64 Bytes of storage. This is segmented into two partitions: 24MB for system use to store printer controller firmware and fonts (Code Flash); 40MB for User Flash storage.

2.4.1 How Firmware Download Works

Firmware Download is accomplished by sending a Firmware Download Format file to the printer over any of the active I/O interfaces (Network, Parallel, Serial, or USB) or from the USB Flash Drive. The Printer Maintenance Utility can be used to send this file to the printer without corrupting the binary data in the file using either a network port, parallel port, or USB2 port. See the Printer Maintenance Utility Help section. If you are sending the Firmware Download file to the printer’s parallel port from a PC, you can use “*copy/b fddata.lod LPT1*” from a DOS command line. The Firmware Download file contains unique information which the controller detects. When firmware download data is detected, the controller enters a Firmware Download Mode (FD Mode).

When the controller enters FD Mode, all normal tasks involved with printing are halted and only the Firmware Upgrade task will consume I/O data - and only from the interface which is sending the Firmware Download data.

The Firmware Download file includes control information about the type of firmware in the download - such as Engine Class, Controller Class, etc. This information is used to ensure that the firmware in the file is appropriate for the controller and engine that is receiving the file.

After the header, there are multiple files that are each included in a File Download format. This format includes information about the file type, file name, file size, file version, and checksum of the file data. The controller will wait for all of the data for each file, and then verify the checksum before allowing the file to be programmed into the flash memory. If the file already exists in Code Flash, the existing file is deleted and the downloaded file is stored. This process is repeated for each file in the download file.

The controller detects the end of the Firmware Download data and displays “Firmware Upgrade Complete” for a short period of time. Then it performs an automatic reboot.

2.4.2 Code FLASH Partitions

The **Code Flash** memory is partitioned into 4 sections:

2.4.2.1 Low-Level Boot Partition

This partition is binary-executable data that is executed when the controller is powered on.This partition is critical as it contains the initial executable code for the controller. While the Firmware Download files usually contain a “Boot File” (a file which is intended for this partition), the partition is not programmed unless the file data is different (newer) than what currently exists in the partition. The code in this Partition is seldom changed - and thus this partition is usually not programmed.

2.4.2.2 Loader / Emergency Upgrade Partition

Firmware in the Boot Partition loads executable code data from this partition. the executable code data in this partition is a Loader program that initializes the file system and attempts to load the large main executable file (system.dwz). This executable file is stored in the Code Flash in a compressed format. If an error is encountered while trying to read or decompress this executable file, the Loader enters an Emergency Upgrade mode.

In Emergency Upgrade mode, only the Parallel port is active. The Parallel port can be used to send a Firmware Download file in an attempt tore-establish the content in the Code Flash memory.

2.4.2.3 Font Binary Partition

This partition contains the large Font Binary Data that is used by the PostScript emulation.

2.4.2.4 File System Partition

This partition is formatted by the system and contains all of the files that are needed for normal run-time operation of the controller. This includes the main executable file, PCL Font files, web page files, etc.

Firmware Download files include a control bit in the header which specifies whether or not this partition should be Formatted prior to downloading the files. Since each downloaded file will be deleted prior to programming, this control bit is normally NOT set. In rare circumstances where there is a new release with a large variation in the make-up of the files that are to be stored in Code Flash, this control bit may be enabled.

2.4.3 Downloading Firmware to a Printer

CAUTION

Downloading firmware to the printer is rewriting the memory which controls the printer. It is important the download finishes normally without interruption. Although the printer has internal features to protect against corruption of the internal flash memory, it is possible to corrupt this memory in a number of ways. It is important to avoid turning off power to the printer during the download, pressing operator panel keys during the download, or disconnecting the I/O cable during a download. Do not open covers, pull out paper trays, or any other operation activities during the download.

Firmware can be loaded into a printer in several ways. Each of these involves simply sending the FW load file to the printer in a way that does not corrupt any of the binary characters in the file. At the end of the download, the printer will automatically re initialize itself. The firmware load file is about an 10 to 15 MB file with 3 char file type of (.lod)

The download can be done via the network, USB, or Parallel. The USB Flash Drive may also be used to send the file.

2.4.3.1 Parallel:

Please use parallel port lpt1

Copy the file to the printer after fresh power on of printer. When the download is fully complete, the printer’s operator panel should indicate it is rebooting.

The simplest way is to use a DOS command:

```
copy/b firmwareVnn.lod lpt1
```

2.4.3.2 USB:

To load the firmware over USB, start with a fresh power on of the printer. Load the PMU (Printer Maintenance Utility) on your PC. Start the utility and identify / select the printer to be the target. To use this utility, there must be a driver installed to support this printer.

When the download is fully complete, the printer’s operator panel should indicate it is rebooting.

2.4.3.3 Network:

To load the firmware over a network connection, start with a fresh power on of the printer. Load the PMU (Printer Maintenance Utility) on your PC. Start the utility. Browse to select the firmware (.lod) file. Enter the IP address of the printer into the IP address area. Press the start button to initiate the download.

When the download is fully complete, the printer’s operator panel should indicate it is rebooting.

2.4.3.4 USB Flash Drive:

To load the firmware from the flash drive, start with a fresh power on of the printer. First load the firmware update file onto the flash drive using a PC. Then inset the flash drive into the connector on the front panel. The printer will sense that a flash drive has been installed and evoke the flash drive menu. Use the menu to "Print" this file.

When the download is fully complete, the printer’s operator panel should indicate it is rebooting. Remove the flash drive at this time.

2.4.4 Error Conditions during the Firmware Download

Following are Error Conditions that can occur during a Firmware Download.

2.4.4.1 Bad Header (File Error 26)

If this error is shown during the Firmware Download, it indicates that the controller detected an error in the integrity of the data in the header section of the download file. This would indicate that either the download file has been corrupted or there is a problem in the transmission that has caused the data to be corrupted. Since no formatting of file downloading has begun, the printer will recover after a reboot.

2.4.4.2 Download Type Mismatch (File Error 29)

If this error is shown during the Firmware Download, it indicated that control values in the header of the Firmware Download file are not appropriate for the engine or controller. Since no formatting of file downloading has begun, the printer will recover after a reboot.

2.4.4.3 Bad Checksum (File Error 27)

If this error is shown during the Firmware Download, it indicated that the checksum calculated for the data in one of the files did not match the checksum indicated in the download file. This would indicate that either the download file has been corrupted or there was a problem in the transmission that has caused the data to be corrupted.

A reboot is required - it is likely that the controller will boot and operate successfully because the error was detected prior to deleting the current version of the file.

*See Note 1.

It is important to resolve the problem and complete an entire download to ensure that all files in Code Flash are updated properly.

2.4.4.4 Interrupted Download

It is possible to interrupt the Firmware download process - by halting or canceling the transmission at the source, disconnecting the transmission cable, or powering off the printer in the midst of a Firmware Download.

In most cases, it is likely that the printer will be able to boot and operate successfully.

*See Note 1.

If power to the printer is interrupted during a Firmware Download, operation after reboot is sometimes not Successful. If the power interruption occurred at certain critical times during FLASH programming, it is possible to end up with a non-recoverable error.

***Note 1:**

In some circumstances, if some files ARE updated successfully, and others are not because of an error - it is possible for the printer to successfully reboot but not operate normally. In this case the operator may observe the printer fail to normally complete the initialization process after a reboot.

2.4.5 Error Conditions after Reboot

There are three possible conditions when rebooting the printer after a Firmware Download.

1) The printer initializes normally and the firmware load is operating normally.

2) The printer initializes and posts a message on the Operator Panel “CODE FLASH ERROR”. In this case, the printer is in Emergency Upgrade Mode and you must send a Firmware Download file to the printer through the parallel port.

3) The printer fails to successfully complete the initialization process. In this case, you need to replace the controller Refer to: Section 6.3 Controller (ESS) / Replacement Removal Procedure.

2.4.6 Printer Maintenance Utility Help

2.4.6.1 Introduction

This utility provides the following maintenance functions:

- Sending data files to one or more printers without interpretation.
- Updating the firmware on one or more printers.
- Capturing the configuration of a printer to a file.
- Updating the configuration of one or more printers.

The printers can be local or network connected. Non-network printers such as USB or Parallel require that a driver be installed supporting he desired port. The utility provides capabilities to select multiple printers to receive the downloads.

2.4.6.2 Menus

All utility functions are accessed through the menus.

FILE MENU

All File Menu items send or receive files from the selected printers. One or more printers must be selected prior to performing these actions. See the Printers Menu.

Send a File to Printers

This function sends a file to one or more printers without interpretation or modification by the printer driver. This is useful for PDF, and other files directly recognized by the printer.

Update Firmware of Printers

This function sends a printer firmware update file to one or more printers.

Printers Menu

The printers Menu items add or hide printers on the printer list.

Add Network Printers

This function discovers network printers and adds them to the printer list. It works by scanning the network to discover printers. Your PC fire wall must be configured to allow the program to scan the network and the printers must have SNMP enabled so they can respond. Configure the Microsoft Fire wall by adding the Printer Maintenance Utility to the programs listed under the exception tab.

Show Local Printers

When the utility is started it will display the local printers that are known to the PC. These printers can be shown through this menu item.

3. Fault Isolation Procedure

NOTE **This manual is based on the assumption that the printer controller is working properly. When the printer controller controls operation directly or any OEM has its unique specifications, the operation may be different from description in this manual.**

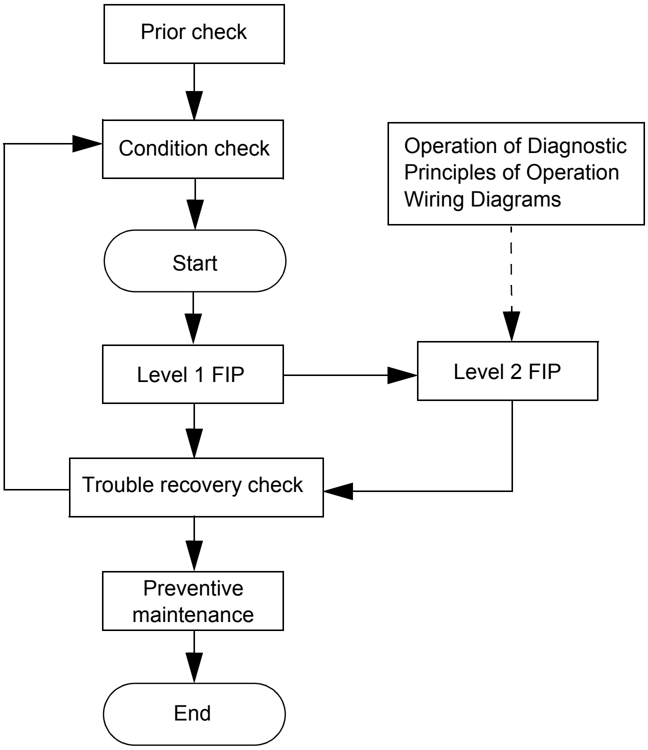
NOTE **Troubleshooting in this manual assumes use of Diagnostic tools (maintenance tools). However, the troubleshooting allows for the case where the Diagnostic tools are not used. You can correct troubles according to these troubleshooting procedures after understanding them well.**

3.1 Progressing with the Troubleshooting

After making sure of actual condition of a trouble, proceed with the troubleshooting process efficiently making use of the Fault Isolation Procedure (FIP), Operation of Diagnostic (Chapter 2), Wiring Diagrams (Chapter 7), and Principles of Operation (Chapter 6).

3.1.1 Flow of Troubleshooting

Flow of the troubleshooting is as follows:


Prior check
Condition check
Operation of Diagnostic
Principles of Operation
Wiring Diagrams
Start
Level 1 FIP
Level 2 FIP
Trouble recovery check
Preventive maintenance
End

3.1.2 Preparatory Requirements

Be sure to check the following items before starting the troubleshooting procedures:

1) Voltage of the power supply is within the specifications (measure the voltage at the electric outlet).

2) Power cord is free from breakage, short-circuit, disconnected wire, or incorrect connection in the power cord.

3) The laser printer is properly grounded.

4) The laser printer is not installed at a place subjected to too high temperature, too high humidity, too low temperature, too low humidity or rapid change of temperature.

5) The laser printer is not installed close to water service, humidifier, heat generating unit, or fire, in very dusty place, or a place exposed to air flow from the air conditioning system.

6) The laser printer is not installed in a place where volatile gas or inflammable gas is generated.

7) The laser printer is not installed under direct sunbeams.

8) The laser printer is installed in a well-ventilated place.

9) The laser printer is installed on a stout and stable plane.

10) Paper used meets specifications (standard paper is recommendable).

11) The laser printer is handled properly.

12) Parts which should be periodically replaced are replaced each time when specified number of sheets have been printed.

3.1.3 Cautions for Service Operations

1) Be sure to remove the power cord except when it is specifically required.

WARNING

If the printer is kept ON, never touch the conductive parts while it is not specifically required.

The power switch and inlet of LVPS is live even while the power supply is cut off. Never touch the live parts.

2) When checking some parts with covers removed and with the interlock and safety and power switches ON, remove the connector (P/J140) on the ROS ASSY except when it is specifically required.

WARNING

When checking some parts with covers removed and with the interlock and safety and power switches ON, laser beams may be irradiated from the ROS ASSY. Since it is dangerous, be sure to remove the connector (P/J140) while it is not required.

3) When checking some parts with the left cover removed and power ON, be sure to remove the connector (P/J31) on the HVPS/MCU while it is not required.

WARNING

When checking some parts with the left cover removed and power ON, high voltage may be applied by the HVPS. Be sure to remove the connector (P/J31) on the HVPS/MCU.

When connecting the connector (P/J31) on the HVPS/MCU according to the instructions of the FIP, never touch the HVPS and parts of high voltage.

4) When using Diagnostic. tools or other tools of high voltage, be sure to keep them covered except when otherwise specified.

WARNING ***When using Diagnostic Tool or other tools of high voltage, never touch parts of high voltage.***
When using Diagnostic Tool or other tools of high voltage, be sure to follow the procedure of this manual.

5) When operating the driving units using the Diagnostic or other tools, be sure to keep them covered unless otherwise specified.

WARNING ***When operating the driving units using the Diagnostic or other tools, never touch the driving units. When operating the driving units using Diagnostic or other tools, be sure to follow the procedures in this manual.***

6) When touching hot parts, be careful not to get burnt.

7) Workers should wear a wrist band or the like to remove static electricity from their body, grounding their body while working.

3.1.4 Cautions for FIP Use

1) It is assumed in the FIP that the printer controller (PWBA ESS) is normally functioning. If any trouble cannot be corrected by troubleshooting, replace the printer controller with a normal one and check for proper operation again.
If the trouble is not still corrected, replace the major parts and then related parts in succession and confirm according to the procedure of the “Check”.

2) When troubleshooting according to the FIP, normal HVPS/MCU, LVPS, FUSER ASSY, BTR ASSY and so no may be necessary for isolation of failed parts. Prepare them in advance.

3) In the initial check according to the FIP, check only items which can be simply checked.

4) In the initial check according to the FIP, check the constitutive parts of the major check parts and related parts, as well as major check parts.

5) When working with the printer, be sure to remove the power cord except when required specifically. Never touch live parts if not required, while the power cord is connected.

6) Connector condition is denoted as follows:
[P/J12] → Connector (P/J12) is connected.
[P12] → Plug side with the connector (P/J12) removed (except when attached directly to the board).
[J12] → Jack side with the connector (P/J12) removed (except when attached directly to the board).

7) [P/J1-2PIN <=> P/J3-4PIN] in the FIP means measurement with the plus side of the measuring instrument connected to [2PIN] of [P/J1] and the minus side to [4PIN] of [P/J3].

8) [P/J1<=> P/J2] in the FIP means measurement for all terminals corresponding between [P/J1] and [P/J2] referring to “Wiring Diagrams”.

9) In [P/J1-2PIN <=> P/J3-4PIN] in the FIP where voltage is measured, [P/J3-4PIN] on the rear minus side is always at the AG (analog ground), SG (signal ground), or RTN (return). Therefore, after checking of proper continuity between AGs, SGs, or RTNs respectively, the rear minus side can be connected to the PIN of AG, SG or RTN instead of [P/J3-4PIN].
However, care should be taken not to mistake since [AG], [SG], and [RTN] are not on the same level.

10) Measure the voltage of small connectors with the special tool. Handle the tool with care, as the leading edge of the tool is pointed.

11) When measuring the voltage, set the EP CARTRIDGE, BRT ASSY and paper tray, close the COVER TOP ASSY, FUSER ASSY, and COVER REAR and power ON if not required specifically.

12) Numerical values in the FIP are only for standard. If numerical values are approximate, they should be considered permissible.

13) Parts which are always removed to check as indicated in the FIP and procedures for that purpose are not specifically referred to here. They should be handled carefully.

14) “Replacement” in the FIP indicates replacement of parts which are considered to be the source of trouble to be checked after replacing those parts, assemblies containing them (HIGH ASSY).

15) The FIP describes the first tray on the lower part of the device as “Tray 1,” and the second tray as “Tray 2”, and the first tray of Option 550 Paper Feeder as “Tray 3”, and the second tray as “Tray 4”.

16) In the FIP, existence and non-existence of Diagnostic tools (maintenance tools) are distinguished in some cases. Correct troubles according to the instructions in the FIP.

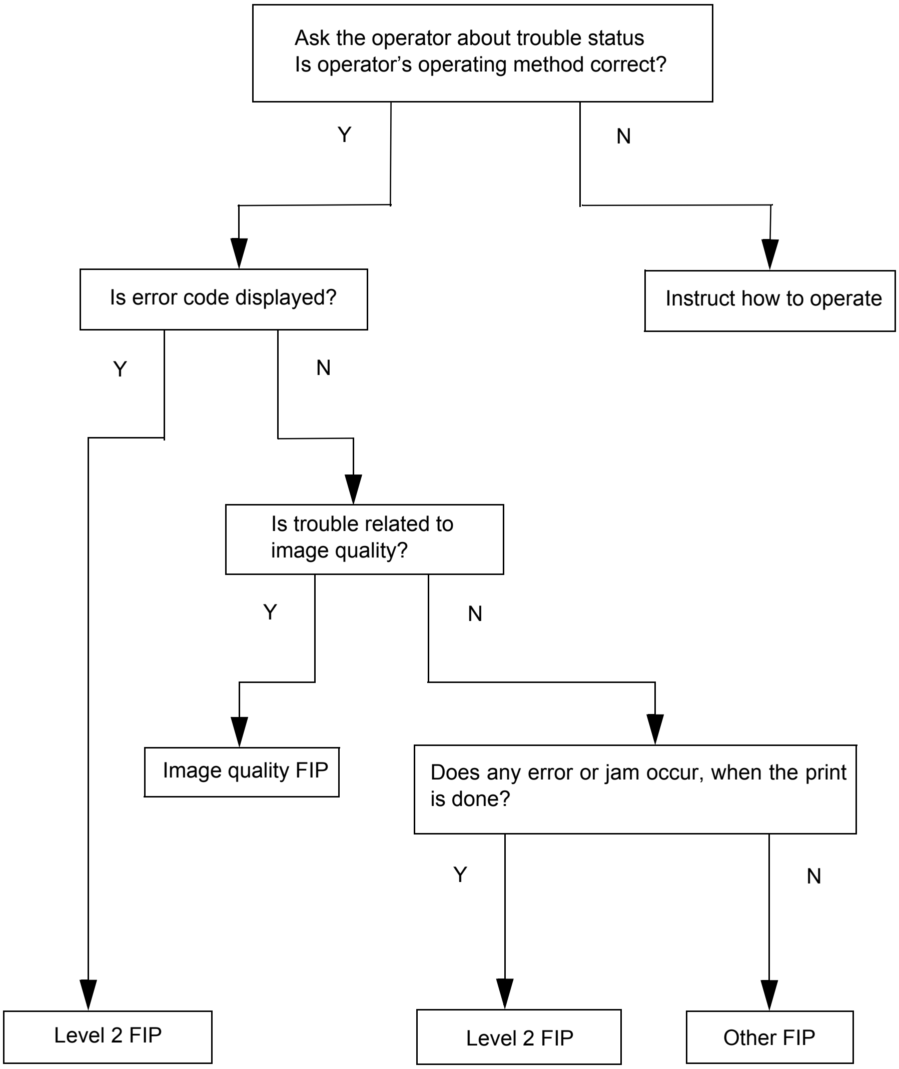
17) In the FIP, procedures are differentiated depending on specifications. Correct troubles according to the instructions in the FIP.

18) For optional parts, some troubleshooting procedure may follow the manual for those options, of which you should take note.
Keep those manuals for the optional parts when required.

3.2 Level 1 FIP

The level 1 FIP is the first step for trouble diagnosis. The level 1 FIP isolates the presence of various troubles including error codes, and the level 2 FIP provides a guide for proceeding of the troubleshooting.

3.2.1 Flow of Level 1 FIP


Ask the operator about trouble status
Is operator's operating method correct?
Y
N
Is error code displayed?
Instruct how to operate
Y
N
Is trouble related to image quality?
Y
N
Image quality FIP
Does any error or jam occur, when the print is done?
Y
N
Level 2 FIP
Level 2 FIP
Other FIP

3.3 Error/Status Code List

NOTE

For information about the following FIP items described in “FIP to be referred” column in the following table, refer to the manual of each Option unit.
FIP1.22 through FIP1.25, and FIP1.33: Option 550 Paper Feeder
FIP1.26 through 32: Option Duplex
FIP1.37 through 43: Option OCT

Status Code	Error Contents	Error Description	FIP to be referred
STATUS 1-5	Cassette Fail	- Paper size is not specified.	FIP1.13 FIP1.22 (Separate volume)
STATUS 1-6	Xero Fail	- EP CARTRIDGE is not installed, or incorrectly installed. - EP CARTRIDGE out of specifications is installed.	FIP1.11
STATUS 2-1	NVM Abnormality	- Failure of the NVRAM occurred at powering on. - Write error to the NVRAM occurred.	FIP1.1
STATUS 2-2	Fan Motor Abnormality	- Abnormal rotation or other failure of the FAN MAIN or FAN SUB occurred.	FIP1.4
STATUS 2-3	Main Motor Abnormality	- Rotation of MAIN MOTOR does not reach the specified speed.	FIP1.5
STATUS 2-4	ROS Motor Abnormality	- Interval of /BD signal after ROS Motor starts is delayed than the specified value. - Interval of /BD signal became delayed than the specified value after it reached the specified value. - Laser beam output is not the specified level.	FIP1.2
STATUS 2-6	Fuser Abnormality	- Fuser does not reach the specified temperature after the specified time elapsed. - Fuser Lamp lights for ten seconds or more in standby. - Fuser temperature became 125 °C or lower during printing. - Fuser temperature became 220 °C or higher. - The thermistor (thermal sensor) have break.	FIP1.3
STATUS 3-1	JS0	STATUS 3-1 to 3-5 indicates JAM by combination of Table 1-1.	-
STATUS 3-2	JS1		
STATUS 3-3	JS2		
STATUS 3-4	JS3		
STATUS 3-5	JS4		
STATUS 3-6	Paper Size Mismatch	- Paper size detected by the Paper Size Switch or set in the NVRAM does not match the paper length obtained from ON time of Regi Sensor at feeding.	FIP1.12

Status Code	Error Contents	Error Description	FIP to be referred
STATUS 15-1	Xero Warning	- Remaining toner in EP CARTRIDGE became low.	FIP1.16
STATUS 15-3	Near end of paper in Tray 4	- Remaining paper in Tray 4 became low.	FIP1.24 (Separate volume)
STATUS 15-4	Near end of paper in Tray 3	- Remaining paper in Tray 3 became low.	FIP1.24 (Separate volume)
STATUS 15-5	Near end of paper in Tray 2	- Remaining paper in Tray 2 became low.	FIP1.15
STATUS 15-6	Fuser Life Warning	- Fuser printed more than 200,000 sheets of paper.	FIP1.17
STATUS 16-1	Face Up Tray Fail	- Face Up Tray is not correctly installed in Duplex or OCT mode.	FIP1.44
STATUS 16-3	Option Tray Unit Fail	- Option Tray is not installed when Option Tray is selected.	FIP1.25 (Separate volume)
STATUS 16-4	Full Stack (500 Paper Exit)	- 500 Paper Exit became Full Stack.	FIP1.45
STATUS 16-5	Full Stack (OCT)	- Option OCT became Full Stack.	FIP1.42 (Separate volume)
STATUS 17-1	Top/Rear Cover Open	- COVER OPEN or COVER REAR 500 is open.	FIP1.6
STATUS 17-2	OCT Cover Open	- Cover of Option OCT is open.	FIP1.37 (Separate volume)
STATUS 17-3	Duplex Cover Open	- Cover of Option Duplex is open.	FIP1.26 (Separate volume)
STATUS 17-4	Inappropriate Opt FDR	- Inappropriate Option Feeder (for example B6300 or B6500) is detected.	FIP1.33 (Separate volume)
STATUS 17-5	OCT Unit Fail	- Option OCT is not installed when OCT mode is selected.	FIP1.38 (Separate volume) FIP1.43 (Separate volume)
STATUS 17-6	Duplex Unit Fail	- Option Duplex removed after powering on.	FIP1.27 (Separate volume) FIP1.32 (Separate volume)

Status Code	Error Contents	Error Description	FIP to be referred
STATUS 21-1	Illegal Size (Duplex/OCT)	- Paper size that is not supported in Duplex or OCT mode is selected.	FIP1.31 (Separate volume) FIP1.41 (Separate volume)
STATUS 21-3	NO Paper in Tray 4	- No paper in Tray 4	FIP1.23 (Separate volume)
STATUS 21-4	NO Paper in Tray 3	- No paper in Tray 3	FIP1.23 (Separate volume)
STATUS 21-5	NO Paper in Tray 2	- No paper in Tray 2	FIP1.14
STATUS 21-6	NO Paper in Tray 1	- No paper in Tray 1	FIP1.14

3.3.0.1 Table 1-1

JS4	JS3	JS2	JS1	JS0	Contents of Jam	Error Description	FIP to be referred
1	0	0	0	1	Exit Jam 1	Paper Jam/Exit - When the paper was not fed to Exit Sensor within the specified time. - When Exit Sensor turned ON in warming up.	FIP1.8
1	1	0	0	1	Exit Jam 2	Paper Jam/Exit - When paper was not fed to Exit Sensor within the specified time after SENSOR REGI OFF.	FIP1.8
0	0	0	0	1	Exit Jam 3	Paper Jam/Exit - When the paper was fed out from Exit Sensor earlier than the specified time.	FIP1.8
0	0	0	1	0	Feed Jam 1 (Early Feed Jam)	Paper Jam/Tray to Regi - When the paper was fed to Regi Sensor earlier than the specified time. - Paper interval became narrow than the specified time because of the two or more papers are fed at a time. - Paper size error. The paper longer than Legal 14” is used.	FIP1.9
0	1	0	1	0	Feed Jam 2 (Misfeed Jam)	Paper Jam/Misfeed - When the paper did not reach Regi position within the specified time.	FIP1.10
0	1	0	1	1	Reg. Jam 1	Paper Jam/Regi to Fuser - When the paper did not reach Fuser from Regi position within the specified time.	FIP1.7

1	0	0	1	1	Reg. Jam 2	Paper Jam/Regi to Fuser - When Regi Sensor turned ON in warming up.	FIP1.7
0	0	1	0	0	Duplex Jam 1	Paper Jam/Dup to Regi - When the paper reached Regi position from Duplex Sensor earlier than the specified time.	FIP1.29 (Separate volume)
0	1	1	0	0	Duplex Jam 2	Paper Jam/Exit to Dup - When the paper did not reach Duplex Sensor within the specified time.	FIP1.28 (Separate volume)
1	0	1	0	0	Duplex Jam 3	Paper Jam/Dup to Regi - When the paper was not fed to Duplex Sensor within the specified time. - When Duplex Sensor turned ON in warming up.	FIP1.29 (Separate volume)
1	1	1	0	0	Duplex Jam 4 (Misfeed Jam)	Paper Jam/Misfeed - When the paper did not reach Regi position from Duplex Sensor within the specified time.	FIP1.30 (Separate volume)
0	1	1	0	1	OCT Jam 1	Paper Jam/Exit to OCT - When the paper did not reach to OCT Sensor from Exit Sensor within the specified time.	FIP1.39 (Separate volume)
1	0	1	0	1	OCT Jam 2	Paper Jam/OCT - When the paper was not fed to OCT Sensor within the specified time. - When OCT Sensor turned ON in warming up.	FIP1.40 (Separate volume)

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3.4 Error Code FIP

3.4.1 Level 1 FIP

3.4.1.1 FIP1.1 NVM Error

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19)		
1	Does Error occur when the power is turned ON?	Go to step 4.	Go to step 2.
2	Does Error still occur when the power is turned OFF and ON again?	Go to step 4.	Go to step 3.
3	Does Error still occur after several ON/OFF procedures of the power?	Go to step 4.	End of work *1
4	Checking HVPS/MCU non-volatile memory setup mode Is non-volatile memory setup mode accessible? Checks by Chapter 2 Diagnostic [ADJUSTMENT PARAMETER INTIALIZE MODE].	Go to step 5.	Replace HVPS/MCU. (RRP12.10)
5	Checking NVRAN for data setup Are all NVRAM data set appropriately? Checks by Chapter 2 Diagnostic [ADJUSTMENT PARAMETER INTIALIZE MODE].	Go to step 7.	Go to step 6.
6	Checking Error after changing HVPS/MCU data setup Change NV RAM data to the correct setup value, and then turn the power ON again. Does Error still occur?	Replace HVPS/MCU, then go to step 7. (RRP12.10)	End of work
7	Checking after replacing HVPS/MCU Does Error occur?	Go to FIP2.19 Electrical Noise.	End of work

*1: Though some kind of foreign noise would be possible cause, go to [FIP2.19 Electrical Noise] and check, to make sure.

3.4.1.2 FIP1.2 ROS Error

Step	Check	Yes	No
	Possible causative parts: ROS ASSY (PL8.1.1) HVPS/MCU (PL12.1.19) EP CARTRIDGE HARNESS ASSY ROS (PL8.1.2) LVPS (PL12.1.5)		
1	Checking NVRAM for data setup value Are the value of NV03 (resolution) and the value of NV04 (Laser Diode output) set at the initial setup value in the factory? Checks by Chapter 2 Diagnostic [ADJUSTMENT PARAMETER INITIALIZE MODE].	Go to FIP2.3 ROS ASSY.	Set NV03 and NV04 to factory setup, and then check again. If Error still occurs, go to FIP2.3 ROS ASSY.

3.4.1.3 FIP1.3 FUSER Error

Step	Check	Yes	No
	Possible causative parts: FUSER ASSY (PL8.1.20) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5) HARNESS ASSY FUSER (PL8.1.17) HARNESS ASSY LVPS (PL12.1.1)		
1	Checking the thermistor for operation Does Error occur soon after the power is turned ON? Error occurs as soon as the power is turned ON, or just after the time when a short warm up period elapsed.	Replace FUSER ASSY. (RRP8.8)	Go to FIP2.4 FUSER ASSY.

3.4.1.4 FIP1.4 FAN Error

Step	Check	Yes	No
	Possible causative parts: FAN MAIN (PL1.1.14) FAN SUB (PL8.1.5) LVPS (PL12.1.5) HVPS/MCU (PL12.1.19)		
1	Checking FAN MAIN for rotation (1) Does FAN MAIN rotate, when the power is turned ON?	Go to step 2.	Go to step 5.
2	Checking FAN SUB for rotation (1) Does FAN SUB rotate, when the power is turned ON?	Go to step 3.	Go to step 9.
3	Checking FAN MAIN for rotation (2) Does FAN MAIN rotate in high-speed? Checks by Chapter 2 Diagnostic [Fan Motor, High Speed Test].	Go to step 4.	Go to step 5.
4	Checking FAN SUB for rotation (2) Does FAN SUB rotate in high-speed? Checks by Chapter 2 Diagnostic [Fan Motor, High Speed Test].	Replace HVPS/ MCU, and watch FUN SUB for a while. (RRP12.10)	Go to step 9.
5	Checking the power to FAN MAIN Is FAN MAIN connected correctly, and is the voltage across P/J24-18 <=> P/J24-17, 24 VDC? (12 VDC, when half-speed)	Go to step 6.	Go to step 7.
6	Checking the FAN ALARM signal (1) Is the voltage across P/J24-17 <=> P/J24-16, 0.82 VDC or more?	Replace FAN MAIN. (RRP12.6)	Replace HVPS/MCU. (RRP12.10)
7	Checking after replacing FAN MAIN Replace the FAN MAIN. Does FAN Error occur when the power is turned ON?	Go to step 8.	End of work
8	Checking after replacing LVPS Replace the LVPS. Does FAN Error occur when the power is turned ON?	Replace HVPS/MCU. (RRP12.10)	End of work
9	Checking the power to FAN SUB Is FAN SUB connected correctly, and is the voltage across P/J27-19 <=> P/J27-18, 24 VDC? (12 VDC, when half-speed)	Go to step 10.	Go to step 11.
10	Checking the FAN ALARM signal Is the voltage across P/J27-18 <=> P/J27-17, 0.82 VDC or more?	Replace FAN SUB (RRP8.2)	Replace HVPS/MCU. (RRP12.10)

Step	Check	Yes	No
11	Checking after replacing FAN SUB Replace the FAN SUB. Does FAN Error occur when the power is turned ON?	Go to step 12.	End of work
12	Checking after replacing LVPS Replace the LVPS. Does FAN Error occur when the power is turned ON?	Replace HVPS/MCU. (RRP12.10)	End of work

3.4.1.5 FIP1.5 MAIN MOTOR Error

Step	Check	Yes	No
	Possible causative parts: MAIN MOTOR (PL11.1.2) GEAR ASSY HOUSING (PL11.1.3) GEAR ASSY PLATE (PL11.1.10) LVPS (PL12.1.5) HVPS/MCU (PL12.1.19)		
1	Checking MAIN MOTOR installation Are MAIN MOTOR, GEAR ASSY HOUSING and GEAR ASSY PLATE installed correctly?	With tool Go to step 2. Without tool Go to step 3.	Reinstall obstructive parts.
2	Checking MAIN MOTOR for operation Does the MAIN MOTOR rotate, and each gear rotate normally? Checks by Chapter 2 Diagnostic [Main Motor Test]. Remove COVER LEFT (PL1.1.6) to check.	Replace HVPS/MCU. (RRP12.10)	Go to step 3.
3	Checking GEAR ASSY HOUSING and GEAR ASSY PLATE for operation Does each gear rotate normally? Rotate and check each gear of GEAR ASSY HOUSING and GEAR ASSY PLATE.	Go to FIP2.2 MAIN MOTOR.	Replace the obstructive parts.

3.4.1.6 FIP1.6 Cover Error

Step	Check	Yes	No
	Possible causative parts: INTERLOCK S/W 24V (PL8.1.11) INTERLOCK S/W 5V (PL8.1.12) INTERLOCK S/W REAR (PL12.1.7) SWITCH I/L ASSY (PL1.1.11) COVER OPEN (PL1.1.2) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5)		
1	Checking COVER OPEN and COVER REAR Are the tabs to push down INTERLOCK S/W 24V, 5V, and REAR, and SWITCH I/L ASSY damaged? Open COVER OPEN and COVER REAR to check.	Replace COVER OPEN or COVER REAR.	With tool Go to step 2. Without tool Go to FIP2.9,10,11, and 12 INTERLOCK S/W.
2	Checking INTERLOCK S/W 24V and 5V on function Does the number on Sensor/Switch Check increase by one, every time INTERLOCK S/W is pushed while pressing down the SWITCH I/L ASSY with a finger? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Go to step 3.	Go to FIP2.9 and 10 INTERLOCK S/W.
3	Checking INTERLOCK REAR on function Does the number on Sensor/Switch Check increase by one, every time INTERLOCK S/W REAR is pushed while pressing down the INTERLOCK S/W 24V with a finger? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Go to step 4.	Go to FIP2.11 INTERLOCK S/W.
4	Checking SWITCH I/L ASSY on function Does the number on Sensor/Switch Check increase by one, every time SWITCH I/L ASSY is pushed while pressing down both INTERLOCK S/W 24V and 5V with the finger? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.10 and 12 INTERLOCK S/W.

3.4.1.7 FIP1.7 Paper Jam/Regi to Fuser

Step	Check	Yes	No
	Possible causative parts: FUSER ASSY (PL8.1.20) HVPS/MCU (PL12.1.19) CLUTCH REGI (PL5.1.23) BTR ASSY (PL8.1.21) EP CARTRIDGE GEAR ASSY HOUSING (PL11.1.3) HARNESS ASSY FUSER (PL8.1.17) LVPS (PL12.1.5) 150 FEEDER ASSY (PL5.1.1) GUIDE ASSY CRU R (PL8.1.25)		
1	Checking the paper condition Is the paper in the tray crumpled or damaged?	Replace the paper with a new and dry one.	Go to step 2.
2	Checking paper size setup Does the paper size in use match the size setup by GUIDE ASSY END or by the Driver on the PC?	Go to step 3.	Replace the paper, or change the paper size set.
3	Checking paper position (1) Does the front end of paper touch with Actuator Exit in FUSER ASSY? Open COVER OPEN (PL1.1.2) to check.	Go to step 7.	Go to step 4.
4	Checking paper position (2) Does the front end of paper go through the Heat Roll / Pressure Roll in FUSER ASSY? Remove EP CARTRIDGE to check.	Replace HVPS/MCU. (RRP12.10)	Go to step 5.
5	Checking paper position (3) Does the front end of paper go through BTR ASSY?	Go to step 15.	Go to step 6.
6	Checking paper position (4) Does the front end of paper go between ROLL REGI METAL (PL5.1.34) and ROLL REGI RUBBER (PL5.1.12)?	Go to step 14.	Go to step 19.
7	Checking Actuator Exit for operation Does Actuator Exit move smoothly, when touching Actuator Exit with a finger inserted from the exit of FUSER ASSY, and moving it up and down? Remove EP CARTRIDGE to check.	With tool Go to step 8. Without tool Go to step 9	Replace FUSER ASSY. (RRP8.8)
8	Checking Exit Sensor for operation (1) Does the number of Sensor/Switch Check increase, every time Actuator Exit is pushed and released? Checks by Chapter 2 Diagnostic [Sensor /Switch Check]. Remove EP CARTRIDGE to check.	Replace HVPS/MCU. (RRP12.10)	Go to step 10.

Step	Check	Yes	No
9	Checking Exit Sensor for operation (2) Is the voltage across P/J46-5 <=> P/J46-4 on LVPS, 0VDC when Actuator Exit is pushed, and 3.3VDC when released? Remove EP CARTRIDGE to check.	Replace LVPS. (RRP12.3)	Go to step 10.
10	Checking HARNESS ASSY FUSER for continuity **Warning; Start the operation after the FUSER ASSY have cooled down.** Disconnect P/J46 from LVPS. Remove FUSER ASSY. (RRP8.8) Is P/J46 <=> P/J4647 continuous normally?	Go to step 11.	Replace HARNESS ASSY FUSER.
11	Checking the power to Exit Sensor Is the voltage across P/J46-3 <=> P/J46-4, 3.3 VDC?	Go to step 13.	Go to step 12.
12	Checking LVPS for continuity Is P/J41-1 <=> P/J46-3 continuous normally?	Go to FIP2.1 LVPS.	Replace LVPS. (RRP12.3)
13	Checking FUSER ASSY roll for operation **Warning; Start the operation after the FUSER ASSY have cooled down.** Remove FUSER ASSY. (RRP8.8) Do the gear and the roll of FUSER ASSY rotate smoothly? Turn the gear of the heater roller of FUSER ASSY with a finger to check.	Replace LVPS. (RRP12.3)	Replace FUSER ASSY. (RRP8.8)
14	Checking BTR ASSY for shape Remove BTR ASSY. (RRP8.10) Are there any abnormalities in BTR ASSY? Check the shape, shaft and Bearing BTR of BTR ASSY.	Go to step 15.	Replace BTR ASSY. (RRP8.10)
15	Checking GUIDE ASSY CRU R Is GUIDE ASSY CRU R damaged or stained?	Clean or replace GUIDE ASSY CRU R. (RRP8.13)	Go to step 16.
16	Checking GUIDE ASSY CRU R for continuity Remove GUIDE ASSY CRU R. (RRP8.13) Is each harness continuous?	Go to step 17.	Replace GUIDE ASSY CRU R. (RRP8.13)
17	Checking after replacing HVPS/MCU Replace HVPS/MCU. (RRP12.10) Carry out a test printing. Does the same trouble occur? Check by Chapter 2 Diagnostic [TEST PATTERN MODE MENU].	Go to step 18.	End of work

Step	Check	Yes	No
18	Checking after replacing EP CARTRIDGE Replace EP CARTRIDGE. Does the similar trouble occur, when the test printing is done? Checks by Chapter 2 Diagnostic [TEST PATTERN MODE MENU].	Go to step 19.	End of work
19	Checking ROLL REGI METAL (PL5.1.34) and ROLL REGI RUBBER (PL5.1.12) for operation Do ROLL REGI METAL and ROLL REGI RUBBER rotate smoothly? Turn ROLL REGI METAL and ROLL REGI RUBBER with a finger to check.	Go to step 20.	Replace 150 FEEDER ASSY. (RRP5.1)
20	Checking GLUTCH REGI for function Does CLUTCH REGI function appropriately? Checks by Chapter 2 Diagnostic [Regi. Roll Clutch Test].	Go to step 21.	Go to FIP2.15 CLUTCH REGI.
21	Checking GEAR ASSY HOUSING operation (1) Remove EP CARTRIDGE. Install COVER ASSY and close it. Does each gear rotate normally? Checks by Chapter 2 Diagnostic [Main Motor Test].	Replace HVPS/MCU. (RRP12.10)	Go to step 22.
22	Checking GEAR ASSY HOUSING operation (2) Does each gear rotate smoothly? Remove GEAR ASSY HOUSING to check. (RRP11.3)	Replace GEAR ASSY HOUSING. (RRP11.3)	Replace the trouble gear.

3.4.1.8 *FIP1.8 Paper Jam/Exit*

Step	Check	Yes	No
	Possible causative parts: FUSER ASSY (PL8.1.20) HVPS/MCU (PL12.1.19) HARNESS ASSY FUSER (PL8.1.17) MOTOR ASSY EXIT (PL10.1.15) LVPS (PL12.1.5) ROLL PINCH EXIT (PL10.1.23) 500 EXIT ASSY (PL10.1.2) 150 PAPER CASSETTE (PL2.1.50) 550 PAPER CASSETTE (PL4.1.50)		
1	Checking the paper condition Is the paper crumpled, damaged or damp?	Replace the paper with a new and dry one.	Go to step 2.
2	Checking the paper size setup Does the paper size in use match the size setup by GUIDE ASSY END or by the driver on the PC?	Go to step 3.	Replace the paper, or set up the paper size correctly.
3	Does Error occur when the power is turned ON?	Go to step 4.	Go to step 6.
4	Checking the paper in Actuator Exit Is there any remaining paper in Actuator Exit?	Remove the paper, and go to step 5.	Go to step 8.
5	Does Error occur when the power is turned ON?	Go to step 8.	Go to step 6.
6	Carrying out a test printing Does Error occur? Checks by Chapter 2 Diagnostic [TEST PATTERN MODE MENU].	Go to step 7.	End of work
7	Checking ROLL PINCH EXIT Remove COVER TOP ASSY (PL1.1.7). (RRP1.4) Is ROLL PINCH EXIT not damaged, and rotating smoothly? Does SPRING PINCH EXIT attach? Turn ROLL EXIT with a finger to check.	Go to step 8.	Replace ROLL PINCH EXIT.
8	Checking ROLL EXIT (PL10.1.12) for rotation Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Turn the power ON. Does ROLL EXIT rotate smoothly during warm up?	Go to step 9.	500 EXIT ASSY. (RRP10.2)

Step	Check	Yes	No
9	Checking Actuator Exit for operation Remove EP CARTRIDGE. Does Actuator Exit move smoothly, when touching Actuator Exit with a finger inserted from the exit of FUSER ASSY, and moving it up and down?	With tool Go to step 10. Without tool Go to step 11.	Replace FUSER ASSY. (RRP8.8)
10	Checking Exit Sensor for operation (1) Remove EP CARTRIDGE. Does the number of Sensor/Switch Check increase by one, every time Actuator Exit is pushed and released? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to step 11.
11	Checking Exit Sensor for operation (2) Remove EP CARTRIDGE. Is the voltage across P/J46-5 <=> P/J46-4 on LVPS, 0VDC when Actuator Exit is pushed, and 3.3VDC when released?	Go to step 14.	Go to step 12.
12	Checking the power to Exit Sensor Is the voltage across P/J46-3 <=> P/J46-4, 3.3VDC?	Replace LVPS. (RRP12.3)	Go to step 13.
13	Checking LVPS for continuity Is P/J41-1 <=> P/J46-3 continuous normally?	Go to FIP2.1 LVPS.	Replace LVPS. (RRP12.3)
14	Checking HARNESS ASSY LVPS for continuity Disconnect P/J11 on HVPS/MCU. Disconnect P/J41 on LVPS. Is J11-10 <=> J41-7 continuous normally?	Replace LVPS. (RRP12.3)	Replace HARNESS ASSY LVPS.

3.4.1.9 FIP1.9 Paper Jam/Tray to Regi

Step	Check	Yes	No
	Possible causative parts: 150 FEEDER ASSY (PL5.1.1) 150 PAPER CASSETTE (PL2.1.50) SENSOR REGI (PL5.1.30) ACTUATOR B (PL5.1.17) CHUTE ASSY FDR1 (PL5.1.3) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5) CHUTE ASSY FDR2 (PL7.1.21, PL20.2.2) CLUTCH ASSY PH (PL5.1.21, PL7.1.20, PL20.2.21) ROLL ASSY RETARD (PL2.1.2, PL4.1.2, PL20.3.2) CLUTCH PR-REGI (PL20.2.22) 550 FEEDER OPION (PL20.2.1) 550 FEEDER ASSY (PL7.1.10) 550 PAPER CASSETTE (PL4.1.50)		
1	Checking the paper size setup Does the paper size in use match the size setup by GUIDE ASSY END or by the driver on the PC?	Go to step 2.	Replace the paper, or change the paper size setup.
2	Does Error occur when the power is turned ON?	Go to step 3.	Go to step 5.
3	Checking the paper at ACTUATOR B Does the paper remain at ACTUATOR B of SENSOR REGI?	Remove the paper, and go to step 4.	Go to FIP2.5 SENSOR REGI.
4	Does Error occur when the power is turned ON?	Go to FIP2.5 SENSOR REGI.	Go to step 5.
5	Checking ROLL ASSY RETARD Is ROLL ASSY RETARD not damaged, and installed correctly? Check the operation of it assembled each Paper Cassette.	Go to step 6.	Replace ROLL ASSY RETARD (RRP2.1, 4.1, 20.17)
6	Carrying out a test printing Does Error occur, when the test printing is done with the paper supplied from the Tray 1 or Tray 2? With the Option 550 Paper Feeder is installed, does Error occur, when the test printing is done with the paper supplied from the Tray 3 or Tray 4? Checks by Chapter 2 Diagnostic [TEST PATTERN MODE MENU].	Go to step 7.	End of work
7	Checking the paper position Remove EP CARTRIDGE. Does the front end of paper touch Actuator B of SENSOR REGI?	Go to step 8.	Go to FIP2.5 SENSOR REGI.

Step	Check	Yes	No
8	Checking a tray feeding the paper When test printing, is the paper supplied from Tray 1 or Tray 2?	With tool Go to step 9. Without tool Go to step 10.	Go to step 11.
9	Checking CLUTCH ASSY PH for operation Does CLUTCH ASSY PH operate normally? Checks by Chapter 2 Diagnostic [Tray1/2 Feed Clutch Test].	Go to step 11.	Go to FIP2.16 CLUTCH ASSY PH.
10	Checking CHUTE ASSY FDR1/2 (PL5.1.3, PL7.1.21) for operation Does each gear and roller of CHUTE ASSY FDR1/2 rotate smoothly? Turn each gear and roller with a finger to check.	Go to step 11.	Replace CHUTE ASSY FDR1/2.
11	Checking a paper feeding tray When test printing, is the paper supplied from Tray 3 or Tray 4?	With tool Go to step 12. Without tool Go to step 13.	Check if the paper is set, and then go to step 8.
12	Checking CLUTCH ASSY PH for operation Does CLUTCH ASSY PH operate normally? Checks by Chapter 2 Diagnostic [Option Tray1/2 Feed Clutch Test].	Go to step 14.	Go to FIP2.25 CLUTCH ASSY PH.
13	Checking 550 FEEDER OPTION for operation Does each gear and roller of 550 FEEDER OPTION rotate smoothly? Turn each gear and roller with a finger to check.	Go to step 15.	Replace Option 550 Paper Feeder.
14	Checking CLUTCH PR-REGI for operation Does CLUTCH PR-REGI operate normally? Checks by Chapter 2 Diagnostic [Option Feeder1/2 Turn Clutch Test].	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.26 CLUTCH PR-REGI.
15	Checking ROLL PINCH TURN (PL20.2.14) for operation Does ROLL PINCH TURN rotate smoothly? Turn ROLL PINCH TURN with a finger to check.	Replace HVPS/MCU. (RRP12.10)	Replace ROLL ASSY TURN (RRP20.13).

3.4.1.10 FIP1.10 Paper Jam/Misfeed

Step	Check	Yes	No
	Possible causative parts: 150 FEEDER ASSY (PL5.1.1) 150 PAPER CASSETTE (PL2.1.50) SENSOR REGI (PL5.1.30) ACTUATOR B (PL5.1.17) LVPS (PL12.1.5) HVPS/MCU (PL12.1.19) CLUTCH REGI (PL5.1.23) CHUTE ASSY FDR1 (PL5.1.3) GEAR ASSY HOUSING (PL11.1.3) SENSOR NO PAPER (PL5.1.38, PL7.1.38, PL20.2.33) CHUTE ASSY FDR2 (PL7.1.21, PL20.2.2) PLATE ASSY BTM (PL2.1.10, PL4.1.10, PL20.3.10) ROLL ASSY RETARD (PL2.1.2, PL4.1.2, PL20.3.2) CLUTCH ASSY PH (PL5.1.21, PL7.1.20, PL20.2.21) ROLL ASSY TURN (PL20.2.14) CLUTCH PR-REGI (PL20.2.22) 550 FEEDER ASSY (PL7.1.10) 550 PAPER CASSETTE (PL4.1.50)		
1	Does Error still occur, after removing all the jamming paper from the feeding tray?	Go to step 2.	Go to FIP1.14 Paper out / Tray 1, 2.
2	Checking paper condition Is the paper curled, damaged or damp?	Replace the paper with a new and dry one	Go to step 3.
3	Checking the paper size setup Does the paper size in use match the size setup by GUIDE ASSY END or by the driver on the PC?	Go to step 4.	Replace the paper, or set up the paper size correctly.
4	Checking PLATE ASSY BTM for operation Is PLATE ASSY BTM pushed up, and moved up and down smoothly, when installing Paper Cassette? Remove Paper Cassette. Check if PLATE ASSY BTM is pushed up, while installing Paper Cassette. Push PLATE ASSY BTM down and release, and check the movement. Check visually if PLATE ASSY BTM is incline to right or left.	Go to step 5.	Replace PLATE ASSY BTM. (RRP2.5, 4.5, 20.21)

Step	Check	Yes	No
5	Is Side Guide tightening the paper too much?	Slightly widen the Side Guide, and run the paper again.	Go to step 6.
6	Checking GEAR ASSY HOUSING for rotation Remove EP CARTRIDGE. Does each gear of GEAR ASSY HOUSING rotate normally? Checks by Chapter 2 Diagnostic [Main Motor Test].	Go to step 7.	Check operation and mounting of GEAR ASSY HOUSING, and then go to FIP2.2 MAIN MOTOR.
7	Checking paper position Remove EP CARTRIDGE. Does the front end of paper touch ACTUATOR B of SENSOR REGI?	Go to step 8.	Go to FIP2.5 SENSOR REGI.
8	Checking ROLL ASSY RETARD Is ROLL ASSY RETARD clean and installed correctly? Check ROLL ASSY RETARD installed to each Paper Cassette.	Go to step 9.	Replace ROLL ASSY RETARD. (RRP2.1, 4.1, 20.17)
9	Checking the paper feeding tray Is the paper for test printing supplied from Tray 1 or Tray 2?	With tool Go to step 10. Without tool Go to step 11.	Go to step 12.
10	Checking CLUTCH ASSY PH for operation Does CLUTCH ASSY PH operate normally? Checks by Chapter 2 Diagnostic [Tray1/2 Feed Clutch Test].	Go to step 12.	Go to FIP2.16 CLUTCH ASSY PH.
11	Checking CHUTE ASSY FDR1/2 for rotation Does each gear and roller of CHUTE ASSY FDR1/2 rotate smoothly? Turn each gear and roller with a finger to check.	Go to step 12.	Replace CHUTE ASSY FDR1/2.
12	Checking the paper feeding tray Is the paper for test printing supplied from Tray 3 or Tray 4?	With tool Go to step 13. Without tool Go to step 14.	Confirm that the paper is set, and then go to step 9.
13	Checking CLUTCH ASSY PH for operation Does CLUTCH ASSY PH operate normally? Checks by Chapter 2 Diagnostic [Option Tray1/2 Feed Clutch Test].	Go to step 15.	Go to FIP2.25 CLUTCH ASSY PH.

14	Checking 550 FEEDER OPTION for operation Does each gear and roller of 550 FEEDER OPTION rotate smoothly? Turn each gear and roller with a finger to check.	Go to step 16.	Replace 550 FEEDER OPTION. (RRP20.9)

Step	Check	Yes	No
15	Checking CLUTCH PR-REGI for operation Does Clutch PR-REGI operate normally? Checks by Chapter 2 Diagnostic [Option Feeder1/2 Turn Clutch Test].	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.26 CLUTCH PR-REGI.
16	Checking ROLL ASSY TURN for rotation Does ROLL ASSY TURN rotate smoothly? Turn ROLL ASSY TURN with a finger to check.	Replace HVPS/MCU. (RRP12.10)	Replace ROLL ASSY TURN. (RRP20.13)

3.4.1.11 FIP1.11 EP CARTRIDGE

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) EP CARTRIDGE GUIDE ASSY CRU R (PL8.1.25)		
1	Checking EP CARTRIDGE (1) Is the EP CARTRIDGE appropriate model? Remove the EP CARTRIDGE to check the model.	Go to step 2.	Replace EP CARTRIDGE.
2	Checking EP CARTRIDGE (2) Install the EP CARTRIDGE again. Does STATUS 1-6 occur again when the power is turned ON?	Go to step 3.	End of work
3	Checking GUIDE ASSY CRU R Remove GUIDE ASSY CRU R. (RRP8.13) Is each harness continuous?	Go to step 4.	Replace GUIDE ASSY CRU R. (RRP8.13)
4	Checking EP CARTRIDGE (3) Replace the EP CARTRIDGE. Does Error occur again when the power is turned ON?	Replace HVPS/MCU. (RRP12.10)	End of work

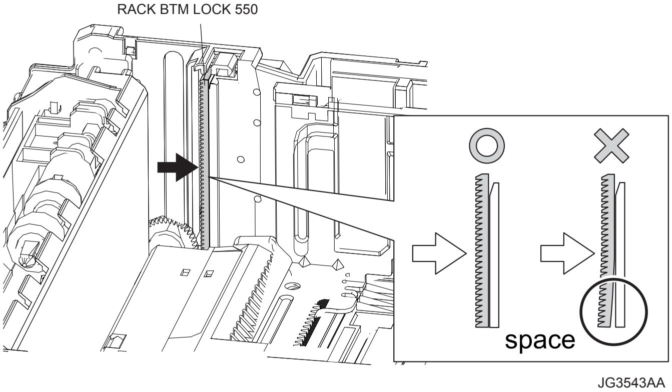
3.4.1.12 FIP1.12 Paper Size Error

Step	Check	Yes	No
	Possible causative parts: 150 FEEDER ASSY (PL5.1.1) 150 PAPER CASSETTE (PL2.1.50) SENSOR REGI (PL5.1.30) ACTUATOR B (PL5.1.17) HVPS/MCU (PL12.1.19) GUIDE TRAY LEFT (PL7.1.7) 550 FEEDER ASSY (PL7.1.10) 550 PAPER CASSETTE (PL4.1.50)		
1	Checking the paper size setup Does the paper size in use match the size setup by GUIDE ASSY END or by the driver on the PC?	Go to step 2.	Replace the paper, or change the paper size setting.
2	Checking NVRAM data Does NV01 Configuration 2 meet the specifications?	Go to step 3.	Modify the memory data.
3	Checking Regi Sensor Remove EP CARTRIDGE. Keep the lever of INTERLOCK S/W pushed as opening COVER OPEN (PL1.1.2). Does the number of Sensor/Switch Check increase one by one, when ACTUATOR B of SENSOR REGI is pushed and released? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Go to step 4.	Go to FIP2.5 SENSOR REGI.
4	Checking the paper feeding tray Is the paper supplied from Tray 1 or Tray 2, when Error is occurred?	Go to step 5.	Go to step 6.
5	Checking Paper Cassette (1) Are GUIDE ASSY END, GEAR SECTOR, RACK SIZE, LINK SW SIZE1/2/3 of Paper Cassette of Tray 1 or Tray 2 installed correctly?	Go to FIP2.17 GUIDE TRAY LEFT.	Reinstall the parts causing Error.
6	Checking the paper tray Is the paper supplied from Tray 3 or Tray 4 when Error is occurred?	Go to step 7.	Replace HVPS/MCU. (RRP12.10)
7	Checking Paper Cassette (2) Are GUIDE ASSY END, GEAR SECTOR, RACK SIZE, LINK SW SIZE1/2/3 of Paper Cassette of Tray 3 or Tray 4 installed correctly?	Go to FIP2.24 OPT ASSY SIZE.	Reinstall the parts causing Error.

3.4.1.13 FIP1.13 No Tray/Tray 1, 2

Step	Check	Yes	No
	Possible causative parts: GUIDE TRAY LEFT (PL7.1.7) 150 PAPER CASSETTE (PL2.1.50) HVPS/MCU (PL12.1.19) 550 PAPER CASSETTE (PL4.1.50)		
1	Does Error occur with Tray 3 or Tray 4?	Go to FIP1.22 “No Tray/Tray 3.4".	Go to step 2.
2	Does Error still occur, after removing and reinserting the Paper Cassette of Tray 1 and Tray 2?	Go to step 3.	End of work
3	Checking Paper Cassette Are GUIDE ASSY END, GEAR SECTOR, RACK SIZE, LINK SW SIZE1/2/3 of Paper Cassette of Tray 1 or Tray 2 installed correctly?	Go to FIP2.17 GUIDE TRAY LEFT.	Reinstall the obstructive parts.

3.4.1.14 FIP1.14 No Paper/Tray 1, 2

Step	Check	Yes	No
	Possible causative parts: SENSOR NO PAPER (PL5.1.38, PL7.1.38) ACTUATOR NO PAPER (PL5.1.6, PL7.1.14) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5) PLATE ASSY BTM (PL2.1.10, PL4.1.10) RACK BTM LOCK 550 (PL4.1.21) HOUSING BASE 550(PL4.1.44)		
1	Does Error Code indicate Tray 3 or Tray 4?	Go to FIP1.23 “No Paper/Tray 3, 4".	Go to step 2.
2	Checking if there is any paper Is there any paper in Tray 1 or Tray 2?	Go to step 3.	Supply paper.
3	Is PLATE ASSY BTM (PL2.1.10, PL4.1.10) lifted correctly?	Go to step 4.	Remove Paper Cassette, and then reinstall it correctly.
4	With pressing down PLATE ASSY BTM, press the center area of RACK BTM LOCK 550 against HOUSING BASE 550. Are RACK BTM LOCK 550 and HOUSING BASE 550 touched each other without any space? 	Go to step 5.	Work over the installation of RACK BTM LOCK 550 again.(RRP4.6)
5	Checking ACTUATOR NO PAPER for operation Remove Paper Cassette. When putting hand from the cassette insertion space to move ACTUATOR NO PAPER, does ACTUATOR NO PAPER move smoothly?	Go to step 6.	Replace ACTUATOR NO PAPER.

Step	Check	Yes	No
6	Checking SENSOR NO PAPER for operation Remove EP CARTRIDGE. Does number of Sensor/Switch Check increase by one, when ACTUATOR NO PAPER is pushed and released?. Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.6 SENSOR NO PAPER.

3.4.1.15 FIP1.15 Low Paper in Tray/Tray 2

Step	Check	Yes	No
	Possible causative parts: SENSOR LOW PAPER (PL7.1.4) ACTUATOR LOW PAPER (PL7.1.5) PLATE ASSY BTM (PL4.1.10) HVPS/MCU (PL12.1.19) 550 PAPER CASSETTE (PL4.1.50) 550 FEEDER ASSY (PL7.1.10)		
1	Checking the sensor for operation Does Error still occur, after Paper Cassette filled with a specified amount of paper is inserted into Tray 2?	Go to step 2.	End of work
2	Checking ACTUATOR LOW PAPER for function Remove Paper Cassette. Does ACTUATOR LOW PAPER move smoothly, when moving ACTUATOR LOW PAPER up and down with a finger? Does ACTUATOR LOW PAPER go into the sensor part of SENSOR LOW PAPER, when the flag is pushed up? Does ACTUATOR LOW PAPER go out of the sensor part of SENSOR LOW PAPER, when the flag is released?	Go to step 3.	Replace ACTUATOR LOW PAPER.
3	Checking PLATE ASSY BTM for operation Does PLATE ASSY BTM move ACTUATOR LOW PAPER normally, when PLATE ASSY BTM is pushed or released?	Go to FIP2.7 SENSOR LOW PAPER.	Replace PLATE ASSY BTM. (RRP4.5)

3.4.1.16 FIP1.16 Drum Life

Step	Check	Yes	No
	Possible causative parts: EP CARTRIDGE GUIDE ASSY CRU R (PL8.1.25) HVPS/MCU (PL12.1.19)		
1	Checking EP CARTRIDGE Does Error still occur, after installing a new EP CARTRIDGE?	Go to step 2.	End of work
2	Checking GUIDE ASSY CRU R for continuity Remove EP CARTRIDGE. Remove GUIDE ASSY CRU R. (RRP8.13) Is each cable of each harness continuous?	Replace HVPS/MCU. (RRP12.10)	Replace GUIDE ASSY CRU R. (RRP8.13)

3.4.1.17 FIP1.17 Fuser Life

Step	Check	Yes	No
	Possible causative parts: FUSER ASSY (PL8.1.20) HARNESS ASSY FUSER (PL8.1.17) HVPS/MCU (PL12.1.19)		
1	Checking FUSER ASSY Does Error still occur, after installing a new FUSER ASSY and sending RESET FUSER LIFE WARNING command? Checks by sending RESET FUSER LIFE WARNING Command from Controller section to MCU section of HVPS/MCU, using Chapter 2 Diagnostic [FUSER WARNING COUNT RESET].	Replace HVPS/MCU. (RRP12.10)	End of work

3.4.1.18 FIP1.18 No Power

Step	Check	Yes	No
	Possible causative parts: POWER CORD (PL12.1.23) LVPS (PL12.1.5) HVPS/MCU (PL12.1.19) OPERATION PANEL (PL1.1.1) HARNESS ASSY PANEL (PL1.1.10) INTERLOCK S/W 24V (PL8.1.11) INTERLOCK S/W 5V (PL8.1.12) INTERLOCK S/W REAR (PL12.1.7) FAN MAIN (PL1.1.14) FAN SUB (PL8.1.5) ROS ASSY (PL8.1.1) FUSER ASSY (PL8.1.20) GEAR ASSY HOUSING (PL11.1.3) MAIN MOTOR (PL11.1.2) CLUTCH REGI (PL5.1.23) PWBA ESS (PL12.1.13) PWBA FEEDER 550 (PL20.1.34) PWBA DUPLEX (PL21.1.32) CLUTCH ASSY PH (PL5.1.21, PL7.1.20, PL20.2.21) CLUTCH PR-REGI (PL20.2.22)		
1	Checking POWER CORD for continuity Is each cable of POWER CORD continuous?	Go to step 2.	Replace POWER CORD.
2	Checking AC power source Does the voltage of AC power source meet commercial voltage?	Go to step 3.	Ask the customer to arrange the AC power source.
3	Checking the fuse Remove SHIELD PLATE LVPS (PL12.1.3). (RRP12.1) Is the fuse on LVPS melt?	Replace LVPS. (RRP12.3)	Go to step 4.
4	Checking Option 550 Paper Feeder (PL20) Do two fans rotate, when the power is turned ON? Remove Option 550 Paper Feeder to check.	Go to FIP2.20,21 PWBA FEEDER 550, FIP2.25 CLUTCH ASSY PH, and FIP2.26 CLUTCH PR-REGI.	Go to step 5.
5	Checking Option Duplex (PL21) Do two fans rotate, when the power is turned ON? Remove Option Duplex to check.	Go to FIP2.27 PWBA DUPLEX, and FIP2.28 MOTOR DUPLEX.	Go to step 6.

Step	Check	Yes	No
6	Checking 24 V power line Remove SHIELD PLATE HVPS (PL12.1.18). Check if P/J10 is connected to HVPS/MCU. Remove EP CARTRIDGE. Check as follows, if each voltage is 24VDC. P/J10-1 <=> P/J10-4 P/J10-2 <=> P/J10-5 P/J10-3 <=> P/J10-6 P/J10-8 <=> P/J10-7	Go to step 7.	Go to FIP2.1 LVPS.
7	Checking CLUTCH REGI (PL5.1.23) Remove SHIELD PLATE HVPS (PL12.1.18). Disconnect P/J243. Remove EP CARTRIDGE. Does FAN MAIN rotate, when the power is turned ON?	Go to FIP2.15 CLUTCH REGI.	Go to step 8.
8	Checking OPERATION PANEL Disconnect HARNESS ASSY PANEL from PWBA ESS. Remove EP CARTRIDGE. Does FAN MAIN rotate, when the power is turned ON? Check with the wind from exhaust on back of the printer.	Go to step 9.	Go to step 10.
9	Checking HARNESS ASSY PANEL for continuity Disconnect HARNESS ASSY PANEL from PWBA ESS. Is there any open circuit or short circuit on the harness, and is every cable continuous?	Replace OPERATIONAL PANEL. (RRP1.4)	Replace HARNESS ASSY PANEL.
10	Checking ROS ASSY Disconnect P/J13, P/J14, P/J16 and P/J17 from HVPS/MCU. Remove EP CARTRIDGE. Does FAN MAIN rotate, when the power is turned ON?	Replace ROS ASSY. (RRP8.1)	Go to step 11.
11	Checking PWBA FEEDER Disconnect P/J20 from HVPS/MCU. Remove EP CARTRIDGE. Does FAN MAIN rotate, when the power is turned ON?	Replace PWBA FEEDER 550. (RRP20.8)	Go to step 12.
12	Checking INTERLOCK S/W Disconnect P/J44 and P/J45 from LVPS. Are the followings continuous when pushing the lever of INTERLOCK S/W, and not continuous when releasing? P/J44-1 <=> P/J44-3 P/J45-1 <=> P/J45-3	Go to step 13.	Replace INTERLOCK S/W. (RRP8.5, 12.5)
13	Checking SWITCH I/L ASSY Disconnect P/J411. Is it continuous between P/J411-2 <=> P/J411-1, when SWITCH I/L ASSY is pushed, and is not when released?	Go to step 14.	Replace SWITCH I/L ASSY. (RRP1.6)

Step	Check	Yes	No
14	Checking CLUTCH ASSY PH Disconnect P/J242 and P/J247 from HARNESS ASSY TRAY 1/2. Remove EP CARTRIDGE. Does the FAN MAIN rotate, when the power is turned ON?	Go to FIP2.16 CLUTCH ASSY PH.	Go to step 15.
15	Checking MAIN MOTOR Disconnect P/J43 from LVPS. Remove EP CARTRIDGE. Does FAN MAIN rotate, when the power is turned ON?	Go to FIP2.2 MAIN MOTOR.	Go to step 16.
16	Checking FAN MAIN Replace FAN MAIN. (RRP12.6) Remove EP CARTRIDGE. Does the FAN MAIN rotate, when the power is turned ON?	End of work	Go to step 17.
17	Checking FAN SUB Replace FAN SUB. (RRP8.2) Remove EP CARTRIDGE. Does the FAN SUB rotate, when the power is turned ON?	End of work	Replace HVPS/MCU. (RRP12.10)

3.4.1.19 FIP1.19 LCD/LED Display Error

Step	Check	Yes	No
	Possible causative parts: OPERATION PANEL (PL1.1.1) HARNESS ASSY PANEL (PL1.1.10) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5)		
1	Checking 3.3VDC power line Is the voltage across the harness of OPERATION PANEL, 3.3 VDC?	Go to step 2.	Go to step 4
2	Checking OPERATION PANEL for continuity (1) Is every cable of HARNESS ASSY PANEL continuous?	Go to step 3.	Replace HARNESS ASSY PANEL.
3	Checking OPERATION PANEL (2) Is the display stable, after replacing OPERATION PANEL? (RRP1.4)	End of work	Replace HVPS/MCU. (RRP12.10)
4	Checking the power to OPERATION PANEL Is the voltage across P/J28-5 <=> P/J28-4 on HVPS/MCU, 3.3VDC?	Go to step 5.	Replace HVPS/MCU. (RRP12.10)
5	Checking FCC ASSY ESS for continuity Disconnect P/J28 from HVPS/MCU. Are the following continuous normally? P/J28-5 <=> P/J280-22 P/J28-4 <=> P/J280-23	Replace PWBA ESS. (PL12.1.13)	Replace FCC ASSY ESS. (PL12.1.16)

3.4.1.20 FIP1.20 Inoperative Keypad

Step	Check	Yes	No
	Possible causative parts: OPERATION PANEL (PL1.1.1) HARNESS ASSY PANEL (PL1.1.10) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5)		
1	Checking 3.3 VDC power line Is the voltage across the harness of OPERATION PANEL, 3.3 VDC?	Go to step 2.	Go to step 4.
2	Checking OPERATION PANEL for continuity (1) Is every cable of HARNESS ASSY PANEL continuous?	Go to step 3.	Replace HARNESS ASSY PANEL.

Step	Check	Yes	No
3	Checking OPERATION PANEL (2) Is the display stable, after replacing OPERATION PANEL? (RRP1.4)	End of work	Replace HVPS/MCU. (RRP12.10)
4	Checking the power to OPERATION PANEL Is the voltage across P/J28-5 <=> P/J28-4 on HVPS/MCU, 3.3VDC?	Go to step 5.	Replace HVPS/MCU. (RRP12.10)
5	Checking FCC ASSY ESS for continuity Disconnect P/J28 from HVPS/MCU. Are the following continuous normally? P/J28-5 <=> P/J280-22 P/J28-4 <=> P/J280-23	Replace PWBA ESS. (PL12.1.13)	Replace FCC ASSY ESS. (PL12.1.16)

3.4.1.21 FIP1.21 Other Printer Error

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) LVPS (PL12.1.5)		
1	Carrying out a test printing Is the printer able to test print? Checks by Chapter 2 Diagnostic [TEST PATTERN MODE MENU].	Go to step 4.	Go to step 2.
2	Checking LVPS (1) Remove SHIELD PLATE LVPS. (RRP12.1) Remove EP CARTRIDGE. Is the voltage across P/J11-13 <=> P/J11-14 on HVPS/MCU, 5 VDC?	Go to step 3.	Go to FIP2.1 LVPS.
3	Checking LVPS (2) Remove EP CARTRIDGE. Is the voltage across P/J11-16 <=> P/J11-15 on HVPS/MCU, 3.3 VDC?	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.1 LVPS.
4	Checking the test printing after installing EP CARTRIDGE. Is the printer reset?	Go to FIP2.19 Electrical Noise.	Go to step 5.
5	Checking Interface Cable Does the problem still occur, after replacing Interface Cable to connect the host with the printer?	Go to step 6.	End of work
6	Check after replacing HVPS/MCU Replace HVPS/MCU. (RRP12.10) Does the problem still occur, after replacing HVPS/MCU?	Let the customer know that possible cause may be in the host computer.	End of work

3.4.1.22 FIP1.44 Face Up Tray Error

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) SENSOR FACE UP OPEN (PL10.1.25) GATE FU (PL10.2.6) LEVER GATE FU (PL10.2.17)		
1	Checking Actuator for operation Does ACTUATOR FULL STACK in GATE FU move smoothly, when moving LEVER GATE FU up and down?	With tool Go to step 2. Without tool Go to step3.	Replace GATE FU.
2	Checking SENSOR FACE UP for operation Remove EP CARTRIDGE. Does the number of Sensor/Switch Check increase by one, every time moving LEVER GATE FU up and down? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Go to step 3.	Go to FIP2.45 SENSOR FACE UP OPEN.
3	Checking SENSOR FACE UP OPEN for operation Replace SENSOR FACE UP OPEN. Does the problem still occur, after replacing SENSOR FACE UP OPEN?	Replace HVPS/MCU. (RRP12.10)	End of work

3.4.1.23 FIP1.45 Full Stack Error/500 Paper Exit

Step	Check	Yes	No
	Possible causative parts: SENSOR FULL STACK (PL10.1.26) ACTUATOR FULL STACK (PL10.1.10) HVPS/MCU (PL12.1.19)		
1	Checking ACTUATOR FULL STACK for operation Does ACTUATOR FULL STACK in paper feed out section move smoothly?	With tool Go to step 2. Without tool Go to step3.	Replace ACTUATOR FULL STACK.
2	Checking SENSOR FULL STACK for operation (1) Remove EP CARTRIDGE. Does the number of Sensor/Switch Check increase by one, every time pushing and releasing ACTUATOR FULL STACK? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Go to step 3.	Go to FIP2.46 SENSOR FULL STACK.

Step	Check	Yes	No
3	Checking SENSOR FULL STACK for operation (2) Replace SENSOR FULL STACK. Does the problem still occur, after replacing SENSOR FULL STACK?	Replace HVPS/MCU. (RRP12.10)	End of work

3.5 Level 2 FIP

The Level 2 FIP is the trouble diagnostic procedure to be sorted based on the symptoms of various troubles. In the troubleshooting, executing the steps given in the FIP or checking procedure allows you to find out a cause of trouble in a short time

3.5.0.1 FIP2.1 LVPS (PL12.1.5)

Step	Check	Yes	No
	Possible causative parts: LVPS (PL12.1.5) HVPS/MCU (PL12.1.19) HARNESS ASSY LVPS (PL12.1.1)		
1	Checking LVPS (PL12.1.5) control power Remove SHIELD PLATE LVPS. (RRP12.1) Disconnect P/J41 from LVPS. Turn the power ON. Check the voltages below are in specified value. P/J41-1 <=> P/J41-2: 3.3 V P/J41-4 <=> P/J41-3: 5 V	Go to step 2.	Replace LVPS. (RRP12.3)
2	Checking LVPS driving power Disconnect P/J42 from LVPS. Turn the power ON. Is the voltage across P/J42-1 <=> P/J42-2, 24 VDC?	Go to step 3.	Go to FIP2.9 INTERLOCK S/W 24V, FIP2.11 INTERLOCK S/W REAR or FIP2.12 SWITCH I/L ASSY.
3	Checking HARNESS ASSY LVPS for continuity Turn the power OFF. Disconnect P/J11 from HVPS/MCU. Disconnect P/J41 from LVPS. Is each cable of J11 <=> J41 continuous?	Go to step 4.	Replace HARNESS ASSY LVPS.
4	Checking AC power source Is AC power supply outlet appropriately wired and earthed?	Replace HVPS/MCU. (RRP12.10)	Inform the client or the electrician.

3.5.0.2 FIP2.2 MAIN MOTOR (PL11.1.2)

Step	Check	Yes	No
	Possible causative parts: MAIN MOTOR (PL11.1.2) HARNESS ASSY LVPS (PL12.1.1) LVPS (PL12.1.5) HVPS/MCU (PL12.1.19)		
1	Checking MAIN MOTOR Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Does MAIN MOTOR rotate, when the power is turned ON? Check by rotation sound of MAIN MOTOR.	Go to step 2.	Go to step 3.
2	Is the trouble eliminated?	End of work	Go to step 3.
3	Checking HARNESS ASSY LVPS for continuity (1) Remove SHIELD PLATE LVPS. (RRP12.1) Disconnect P/J41 from LVPS. Disconnect P/J11 from HVPS/MCU. Is each cable of P/J41 <=> P/J11 continuous?	Go to step 4.	Replace HARNESS ASSY LVPS.
4	Checking HARNESS ASSY LVPS for continuity (2) Remove SHIELD PLATE LVPS. (RRP12.1) Disconnect P/J42 from LVPS. Disconnect P/J10 from HVPS/MCU. Is each cable of P/J42 <=> P/J10 continuous?	Go to step 5.	Replace HARNESS ASSY LVPS.
5	Checking LVPS Replace LVPS. (RRP12.3) Is the trouble eliminated?	End of work	Go to step 6.
6	Checking HVPS/MCU Replace HVPS/MCU. (RRP12.10) Is the trouble eliminated?	End of work	Replace MAIN MOTOR. (RRP11.2)

3.5.0.3 FIP2.3 ROS ASSY (PL8.1.1)

Step	Check	Yes	No
	Possible causative parts: ROS ASSY (PL8.1.1) HARNESS ASSY ROS (PL8.1.2) INTERLOCK S/W 5V (PL8.1.12) HARNESS ASSY LVPS (PL12.1.1) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5)		
1	Checking the power to Laser Diode of ROS ASSY Remove COVER TOP ASSY (PL1.1.7). (RRP1.4) Disconnect P/J140 from ROS ASSY. Install EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Is the voltage across J140-8 <=> J140-7, 5 VDC?	Go to step 8.	Go to step 2.
2	Checking INTERLOCK S/W 5V Remove INTERLOCK S/W 5V. Is it continuous between P/J142-1 <=> P/J142-3, when INTERLOCK S/W 5V is pushed, and is not when released?	Go to step 3.	Replace INTERLOCK S/W 5V. (RRP8.5)
3	Checking SWITCH I/L ASSY 5V Remove SWITCH I/L ASSY 5V. Is it continuous between P/J144-1 <=> P/J144-3, when SWITCH I/L ASSY 5 V is pushed, and is not when released?	Go to step 4.	Replace SWITCH I/L ASSY 5V. (RRP1.6)
4	Checking HARNESS ASSY LVPS Disconnect P/J141 of HARNESS ASSY LVPS. Is it conductive between P/J141-1 <=> P/J141-3 when INTERLOCK S/W 5V and SWITCH I/L ASSY 5V are pushed simultaneously, and is not when released?	Go to step 5.	Replace HARNESS ASSY LVPS.
5	Checking HARNESS ASSY ROS Disconnect P/J14 from HVPS/MCU. Disconnect P/J140 from ROS ASSY. Is it continuous between P/J14-1 <=> P/J140-8, when INTERLOCK S/W 5V and SWITCH I/L ASSY 5V are pushed simultaneously, and is not when released?	Go to step 6.	Replace HARNESS ASSY ROS.
6	Checking power to HVPS/MCU Remove SHIELD PLATE LVPS. (RRP12.1) Install EP CARTRIDGE. Disconnect P/J41 from LVPS. Is the voltage across P/J41-4 <=> P/J41-3, 5 VDC?	Replace LVPS. (RRP12.3).	Go to step 7.
7	Checking HVPS/MCU for continuity Disconnect P/J14 and P/J11 from HVPS/MCU. Is P/J14-1 <=> P/J11-13 continuous normally?	Go to step 8.	Replace HVPS/MCU. (RRP12.10).

Step	Check	Yes	No
8	Checking HARNESS ASSY LVPS for continuity Disconnect P/J11 from HVPS/MCU. Is P/J11-13 <=> P/J41-4 continuous normally?	Go to step 9.	Replace HARNESS ASSY LVPS.
9	Checking /ROSMOT ON signal of Scanner Motor Install EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Is P/J13-3 <=> P/J13-2 on HVPS/MCU, 0 V just after when the power is turned ON, and 5VDC 10 seconds after stopping MAIN MOTOR?	Go to step 11.	Go to step 10.
10	Checking HARNESS ASSY ROS for continuity Disconnect P/J13 from HVPS/MCU. Is each cable of P/J13 <=> P/J130 continuous?	Replace HVPS/MCU. (RRP12.10)	Replace HARNESS ASSY ROS.
11	Checking HARNESS ASSY ROS for continuity Disconnect P/J17 and P/J16 from HVPS/MCU. Disconnect P/J170 and P/J160 from ROS ASSY. Are the following continuous normally? P/J17 <=> P/J170 P/J16 <=> P/J160	Go to step 12.	Replace HARNESS ASSY ROS.
12	Checking SOS power circuit of ROS ASSY Disconnect P/J140 from ROS ASSY. Are the following continuous normally? P/J140-8 <=> P/J201-1 P/J140-6 <=> P/J201-2 P/J140-7 <=> P/J201-3	Go to step 13.	Replace ROS ASSY. (RRP8.1)
13	Checking after replacing HVPS/MCU Replace HVPS/MCU. (RRP12.10) Does the problem still occur, after replacement?	Go to step 14.	End of work
14	Checking after replacing ROS ASSY Replace ROS ASSY. (RRP8.1) Does the problem still occur, after replacement?	Go to FIP2.19 Electrical Noise.	End of work

3.5.0.4 FIP2.4 FUSER ASSY (PL8.1.20)

Step	Check	Yes	No
	Possible causative parts: FUSER ASSY (PL8.1.20) HVPS/MCU (PL12.1.19) INTERLOCK S/W 24V (PL8.1.11) HARNESS ASSY FUSER 100V/200V (PL8.1.17) HARNESS ASSY AC100V/200V (PL12.1.8) LVPS (PL12.1.5) HARNESS ASSY LVPS (PL12.1.1)		
1	Checking Heater circuit for continuity Remove SHIELD PLATE LVPS. (RRP12.1) Disconnect P/J47 from LVPS. Are the following continuous normally? J47-1 <=> J47-5 J47-1 <=> J47-3	Go to step 3.	Go to step 2.
2	Checking HARNESS ASSY FUSER for continuity Remove FUSER ASSY. (RRP8.8) **Warning; Start the operation after the FUSER ASSY have cooled down.** Are the following continuous normally? J4647B-3 <=> J47-1 J4647B-2 <=> J47-3 J4647B-1 <=> J47-5	Replace FUSER ASSY. (RRP8.8)	Replace HARNESS ASSY FUSER. (RRP8.7)
3	Checking Fuser power source voltage Disconnect P/J48 from LVPS. Remove EP CARTRIDGE. Turn the power to ON. Is the voltage across P/J48-1 <=> P/J48-3, commercial voltage?	Go to step 5.	Go to step 4.
4	Checking AC line voltage Is the AC line voltage the commercial voltage?	Replace HARNESS ASSY AC100V/200V (RRP12.4)	Inform the client or the electrician.
5	Checking Heater Rod ON signal voltage Make sure FUSER ASSY is cooled down. Make sure that EP CARTRIDGE is removed. Is the voltage across P/J41-13 and P/J41-12 <=> P/J41-3, 0VDC when Heater Rod lights on, and 3.3VDC when off?	Go to step 7.	Go to step 6.

Step	Check	Yes	No
6	Checking HARNESS ASSY LVPS for continuity Disconnect P/J11 from HVPS/MCU. Are the following continuous normally? P/J41-1 <=> P/J11-16 P/J41-9 <=> P/J11-8 P/J41-10 <=> P/J11-7 P/J41-12 <=> P/J11-5 P/J41-13 <=> P/J11-4	Replace HVPS/MCU. (RRP12.10)	Replace HARNESS ASSY LVPS.
7	Checking the resistance of Thermistor of Temperature Sensor Disconnect P/J46 from LVPS. Is the resistance between P/J46-6 <=> P/J46-7 and P/J46-1 <=> P/J46-2 about 480 k-ohm in the normal temperature (about 20 °C)?	Go to step 8.	Replace FUSER ASSY. (RRP8.8)
8	Checking after replacing HVPS/MCU Replace HVPS/MCU. (RRP12.10) Does the problem still occur after replacement?	Go to step 9.	End of work
9	Checking after replacing LVPS Replace LVPS. (RRP12.3) Does the problem still occur after replacement?	Replace FUSER ASSY. (RRP8.8)	End of work

3.5.0.5 FIP2.5 SENSOR REGI (PL5.1.30)

Step	Check	Yes	No
	Possible causative parts: SENSOR REGI (PL5.1.30) ACTUATOR B (PL5.1.17) 150 FEEDER ASSY (PL5.1.1) HARNESS ASSY TRAY1 (PL5.1.37) HARNESS ASSY CHUTE (PL12.1.17) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5)		
1	Checking ACTUATOR B for operation and shape Remove 150 FEEDER ASSY. (RRP5.1) Does ACTUATOR B operate smoothly? Is the flag of ACTUATOR B formed normally to shield the Sensor detecting point? Check if the flag of ACTUATOR B is formed normally again, pushing ACTUATOR B by inserting a mini screwdriver from the paper entrance space at the lower and side sections each of 150 FEEDER ASSY.	With tool Go to step 2. Without tool Go to step 3.	Replace ACTUATOR B.
2	Checking SENSOR REGI (1) Connect the connector J241 of HARNESS ASSY TRAY1 to SENSOR REGI, with 150 FEEDER ASSY removed. Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Does the number of Sensor/Switch Check increase by one, by moving ACTUATOR B with a mini screwdriver? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.19)	Go to step 4.
3	Check SENSOR REGI (2) Connect the connector J241 of HARNESS ASSY TRAY1 to SENSOR REGI, with 150 FEEDER ASSY removed. Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Is the voltage across P/J24-11 <=> P/J24-10, 3.3 VDC when ACTUATOR B is pushed, and 0 VDC when released? Measure the voltage by moving ACTUATOR B with a mini screwdriver.	Replace HVPS/MCU. (RRP12.19)	Go to step 4.
4	Checking the power to SENSOR REGI Remove EP CARTRIDGE. Is the voltage across P/J24-9 <=> P/J24-10 on HVPS/MCU, about 3.3 VDC?	Go to step 5.	Go to step 7.

Step	Check	Yes	No
5	Checking HARNESS ASSY CHUTE for continuity Disconnect P/J24 from HVPS/MCU. Disconnect P/J245. Are the following continuous normally? J24-9 <=> J245-10 J24-10 <=> J245-9 J24-11 <=> J245-8	Go to step 6.	Replace HARNESS ASSY CHUTE.
6	Checking HARNESS ASSY TRAY1 for continuity Remove SENSOR REGI. (RRP5.7) Disconnect P/J245. Are the following continuous normally? P/J245-4 <=> P/J241-3 P/J245-5 <=> P/J241-2 P/J245-6 <=> P/J241-1	Go to step 8.	Replace HARNESS ASSY TRAY1.
7	Checking HVPS/MCU for continuity Disconnect P/J11 from HVPS/MCU. Is P/J11-16 <=> P/J24-9 continuous normally?	Go to FIP2.1 LVPS.	Replace HVPS/MCU. (RRP12.10)
8	Checking SENSOR REGI (3) Replace SENSOR REGI. (RRP5.7) Does the problem occur after replacement?	Replace HVPS/MCU. (RRP12.10)	End of work

3.5.0.6 FIP2.6 SENSOR NO PAPER (PL5.1.38, PL7.1.38)

Step	Check	Yes	No
	Possible causative parts: SENSOR NO PAPER (PL5.1.38, PL7.1.38) ACTUATOR NO PAPER (PL5.1.6, PL7.1.14) 150 FEEDER ASSY (PL5.1.1) HARNESS ASSY TRAY1 (PL5.1.37) HARNESS ASSY TRAY2 (PL7.1.36) HARNESS ASSY CHUTE (PL12.1.17) HVPS/MCU (PL12.1.19) PLATE ASSY BTM (PL2.1.10, PL4.1.10) LVPS (PL12.1.5) 550 FEEDER ASSY (PL7.1.10)		
1	Checking ACTUATOR NO PAPER for shape and operation Does ACTUATOR NO PAPER operate smoothly? Is the flag between the sensor detecting point when ACTUATOR NO PAPER is low (there is no paper), and out of the detecting point when ACTUATOR NO PAPER is high (there is paper)?	Go to step 2.	Replace ACTUATOR NO PAPER.
2	Checking PLATE ASSY BTM Fit the empty Paper Cassette. Is the flag of ACTUATOR NO PAPER located in between sensor detecting point?	With tool Go to step 3. Without tool Go to step 4.	Replace PLATE ASSY BTM. (RRP2.5, 4.5)
3	Checking SENSOR NO PAPER (1) Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Remove Paper Cassette. Put the hand from the tray insertion space, and move ACTUATOR NO PAPER up and down. Does the number increase one by one, as ACTUATOR NO PAPER operates? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HDVS/MCU. (RRP12.10)	Go to step 5.
4	Checking SENSOR NO PAPER (2) Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Remove Paper Cassette. Put the hand from the tray insertion space, move ACTUATOR NO PAPER up and down. Is each voltage across P/J24-8 <=> P/J24-7 and P/J24-3 <=> P/J24-2, 0VDC when ACTUATOR NO PAPER is moved up, 3.3VDC when down?	Replace HDVS/MCU. (RRP12.10)	Go to step 5.
5	Checking the power to SENSOR NO PAPER Remove EP CARTRIDGE. Is each voltage across P/J24-6 <=> P/J24-7 and P/J24-1 <=> P/J24-2 on HVPS/MCU, 3.3 VDC?	Go to step 6.	Go to step 8.

Step	Check	Yes	No
6	Checking HARNESS ASSY CHUTE for continuity Disconnect P/J24 from HVPS/MCU. Disconnect P/J245 and P/J248. Are the following continuous normally? J24-6 <=> J245-13 J24-7 <=> J245-12 J24-8 <=> J245-11 J24-1 <=> J248-5 J24-2 <=> J248-4 J24-3 <=> J248-3	Go to step 7.	Replace HARNESS ASSY CHUTE.
7	Checking HARNESS ASSY TRAY1 and HARNESS ASSY TRAY2 for continuity Remove SENSOR NO PAPER. Disconnect P/J24 from HVPS/MCU. Are the following continuous normally? P/J245-1 <=> P/J240-3 P/J245-2 <=> P/J240-2 P/J245-3 <=> P/J240-1 P/J248-1 <=> P/J246-3 P/J248-2 <=> P/J246-2 P/J248-3 <=> P/J246-1	Go to step 9.	Replace HARNESS ASSY TRAY1 or HARNESS ASSY TRAY2.
8	Checking HVPS/MCU for continuity Disconnect P/J11 from HVPS/MCU. Is P/J11-16 <=> P/J24-6 and P/J11-16 <=> P/J24-1 each continuous normally?	Go to FIP2.1 LVPS.	Replace HVPS/MCU. (RRP12.10)
9	Checking SENSOR NO PAPER (3) Replace SENSOR NO PAPER. (RRP5.8, 7.6) Does the problem still occur, after replacement?	Replace HVPS/MCU. (RRP12.10)	End of work

3.5.0.7 FIP2.7 SENSOR LOW PAPER (PL7.1.4)

Step	Check	Yes	No
	Possible causative parts: SENSOR LOW PAPER (PL7.1.4) ACTUATOR LOW PAPER (PL7.1.5) PLATE ASSY BTM (PL4.1.10) HARNESS ASSY LOW1 (PL7.1.2) LVPS (PL12.1.5) HVPS/MCU (PL12.1.19)		
1	Checking ACTUATOR LOW PAPER for operation Install Paper Cassette. Does ACTUATOR LOW PAPER operate smoothly, when PLATE ASSY BTP is pushed and released by the hand? Does the flag go into the detection point of the sensor, when PLATE ASSY BTM is released (Actuator is pushed up), and out of the detection point, when pushed down?	With tool Go to step 2. Without tool Go to step 3.	Replace ACTUATOR LOW PAPER.
2	Checking SENSOR LOW PAPER for operation (1) Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Remove Paper Cassette. Manually move the PAPER LOW ACTUATOR. Does the number increase one by one, as PAPER LOW ACTUATOR moves? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HDVS/MCU. (RRP12.10)	Go to step 3.
3	Checking HARNESS ASSY LOW1 for continuity Remove HARNESS ASSY LOW1. Is J260 <=> J26 continuous normally?	Go to step 4.	Replace HARNESS ASSY LOW1.
4	Checking SENSOR LOW PAPER (2) Replace SENSOR LOW PAPER. (RRP7.9) Does the problem still occur, after replacement?	Replace HDVS/MCU. (RRP12.10)	End of work

3.5.0.8 FIP2.8 SENSOR TONER (PL5.1.46)

Step	Check	Yes	No
	Possible causative parts: SENSOR TONER (PL5.1.46) SENSOR TONER ASSY (PL5.1.45) HARNESS ASSY TONER1 (PL5.1.50) HARNESS ASSY TONER2 (PL12.1.28) EP CARTRIDGE HVPS/MCU (PL12.1.19)		
1	Checking EP CARTRIDGE (1) Does sufficient toner in EP CARTRIDGE remain?	Go to step 3.	Go to step 2.
2	Checking EP CARTRIDGE (2) Does the problem still occur, after replacing EP CARTRIDGE?	Go to step 3.	End of work
3	Checking SENSOR TONER ASSY installation Is SENSOR TONER ASSY installed correctly, and does HOLDER-D operate smoothly?	Go to step 4.	Replace SENSOR TONER ASSY.
4	Checking HARNESS ASSY TONER1 for continuity Remove HARNESS ASSY TONER1. Is J220 <=> J221 continuous normally?	Go to step 5.	Replace HARNESS ASSY TONER1.
5	Checking HARNESS ASSY TONER2 for continuity Remove HARNESS ASSY TONER2. Is J22 <=> J221 continuous normally?	Go to step 6.	Replace HARNESS ASSY TONER2.
6	Checking SENSOR TONER Replace SENSOR TONER. (RRP5.9) Does the problem still occur, after replacement?	Replace HVPS/MCU. (RRP12.10)	End of work

3.5.0.9 FIP2.9 INTERLOCK S/W 24V (PL8.1.11)

Step	Check	Yes	No
	Possible causative parts: INTERLOCK S/W 24V (PL8.1.11) LVPS (PL12.1.5) HVPS/MCU (PL12.1.19)		
1	Checking INTERLOCK S/W 24V Disconnect P/J45 from LVPS. Is P/J45-1 <=> P/J45-3 continuous, when INTERLOCK S/W 24V is pushed, and not when released?	Go to FIP2.1 LVPS.	Replace INTERLOCK S/W 24V. (RRP8.5)

3.5.0.10 FIP2.10 INTERLOCK S/W 5V (PL8.1.12), SWITCH I/L ASSY (PL1.1.11)

Step	Check	Yes	No
	Possible causative parts: INTERLOCK S/W 5V (PL8.1.12) SWITCH I/L ASSY (PL1.1.11) HARNESS ASSY ROS (PL8.1.2) HARNESS ASSY LVPS (PL12.1.1) LVPS (PL12.1.5) HVPS/MCU (PL12.1.19)		
1	Checking INTERLOCK S/W 5VL Remove INTERLOCK S/W 5VL. Is P/J142-1 <=> P/J142-3 continuous, when INTERLOCK S/W 5V is pushed, and not when released?	Go to step 2.	Replace INTERLOCK S/W 5VL. (RRP8.5)
2	Checking SWITCH I/L ASSY Remove INTERLOCK S/W 5VR. Is P/J144-1 <=> P/J144-3 continuous, when INTERLOCK S/W 5VR is pushed, and not when released?	Go to step 3.	Replace SWITCH I/L ASSY. (RRP1.6)
3	Checking HARNESS ASSY LVPS for continuity Disconnect P/J141, P/J142 and P/J144 of HARNESS ASSY LVPS. Are the following continuous normally? J141-3 <=> P142-1 J141-1 <=> P144-3 J142-3 <=> P144-1	Go to step 4.	Replace HARNESS ASSY LVPS.
4	Checking HARNESS ASSY ROS for continuity Disconnect P/J141, P/J14 and P/J140 of HARNESS ASSY ROS. Are the following continuous normally? P141-1 <=> J14-1 P141-3 <=> P140-8	Go to FIP2.1 LVPS.	Replace HARNESS ASSY ROS.

3.5.0.11 FIP2.11 INTERLOCK S/W REAR (PL12.1.7)

Step	Check	Yes	No
	Possible causative parts: INTERLOCK S/W REAR (PL12.1.7) LVPS (PL12.1.5) HVPS/MCU (PL12.1.19)		

Step	Check	Yes	No
1	Checking INTERLOCK S/W REAR for continuity Disconnect P/J44 from LVPS. Is P/J44-1 <=> P/J44-3 continuous, when INTERLOCK S/W REAR is pushed, and not when released?	Go to FIP2.1 LVPS.	Replace INTERLOCK S/W REAR. (RRP12.5)

3.5.0.12 FIP2.12 SWITCH I/L ASSY (PL1.1.11) (Interlock S/W Front R)

Step	Check	Yes	No
	Possible causative parts: SWITCH I/L ASSY (PL1.1.11) LVPS (PL12.1.5) HVPS/MCU (PL12.1.19)		
1	Checking SWITCH I/L ASSY for continuity Disconnect P/J411. Is P/J411-1 <=> P/J411-2 continuous, when SWITCH I/L ASSY is pushed, and not when released?	Go to step 2.	Replace SWITCH I/L ASSY. (RRP1.6)
2	Checking HARNESS ASSY LVPS for continuity Disconnect P/J11, P/J41 and P/J411. Are the following continuous normally? P411-2 <=> J41-5 P411-1 <=> J11-12	Go to FIP2.1 LVPS.	Replace HARNESS ASSY LVPS.

3.5.0.13 FIP2.13 PWBA EXIT MOTOR (PL12.1.4)

Step	Check	Yes	No
	Possible causative parts: PWBA EXIT MOTOR (PL12.1.4) HARNESS ASSY LVPS (PL12.1.1) LVPS (PL12.1.5) HVPS/MCU (PL12.1.19)		
1	Checking HARNESS ASSY LVPS for continuity Disconnect P/J27, P/J10, P/J102 and P/J101 from HARNESS ASSY LVPS. Are the following continuous normally? J27 <=> J102	Go to step 2.	Replace HARNESS ASSY LVPS.
2	Checking PWBA EXIT MOTOR power source voltage Disconnect P/J101 from PWBA EXIT MOTOR. Is the voltage across J101-2 <=> J101-1, 24 VDC?	Go to step 3.	Replace LVPS. (RRP12.3)
3	Checking PWBA EXIT MOTOR Replace PWBA EXIT MOTOR. (RRP12.2) Is the problem cleared, after replacement?	End of work	Replace HVPS/MCU. (RRP12.10)

3.5.0.14 FIP2.14 MOTOR ASSY EXIT (PL10.1.15)

Step	Check	Yes	No
	Possible causative parts: MOTOR ASSY EXIT (PL10.1.15) PWBA EXIT MOTOR (PL12.1.4) HARNESS ASSY LVPS (PL12.1.1) LVPS (PL12.1.5) HVPS/MCU (PL12.1.19)		
1	Checking MOTOR ASSY EXIT for operation Not using DIAG tool Replace MOTOR ASSY EXIT. (RRP10.5) Is the problem cleared, after replacement?	End of work	Go to step 3.
	Using DIAG tool Does the MOTOR ASSY EXIT rotate? Checks by Chapter 2 Diagnostic: [Exit Motor, Clockwise Test] [Exit Motor, Counterclockwise, High Speed Test] [Exit Motor, Counterclockwise, Low Speed Test]	End of work	Go to step2.
2	Checking MOTOR ASSY EXIT Replace MOTOR ASSY EXIT. (RRP10.5) Is the problem cleared, after replacement?	End of work.	Go to step 3.
3	Checking HARNESS ASSY LVPS for continuity Disconnect P/J27, P/J10, P/J102 and P/J101 from HARNESS ASSY LVPS. Are the following continuous normally? J27 <=> J102	Go to step 4.	Replace HARNESS ASSY LVPS.
4	Checking MOTOR ASSY EXIT power source voltage Disconnect P/J101 from PWBA EXIT MOTOR. Is the voltage across J101-2 <=> J101-1, 24 VDC?	Go to step 5.	Replace LVPS. (RRP12.3)
5	Checking PWBA EXIT MOTOR Replace PWBA EXIT MOTOR. (RRP12.2) Is the problem cleared, after replacement?	End of work	Replace HVPS/MCU. (RRP12.10)

3.5.0.15 FIP2.15 CLUTCH REGI (PL5.1.23)

Step	Check	Yes	No
	Possible causative parts: CLUTCH REGI (PL5.1.23) HARNESS ASSY CHUTE (PL12.1.17) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5)		
1	Checking HARNESS ASSY CHUTE for continuity Disconnect P/J24 from HVPS/MCU. Are the following continuous normally? J24-14 <=> J243-2 J24-15 <=> J243-1	Go to step 2.	Replace HARNESS ASSY CHUTE.
2	Checking the resistance of CLUTCH REGI Is the resistance of the wire wound resistor between P/J243-1 <=> P/J243-2 of CLUTCH REGI, 172 ohm +/ -10% (at 20 °C)?	Go to step 3.	Replace CLUTCH REGI. (RRP5.6)
3	Checking HVPS/MCU for continuity Disconnect P/J24 and P/J10 from HVPS/MCU. Is J24-14 <=> J10-1 continuous normally?	Go to FIP2.1 LVPS.	Replace HVPS/MCU. (RRP12.10)

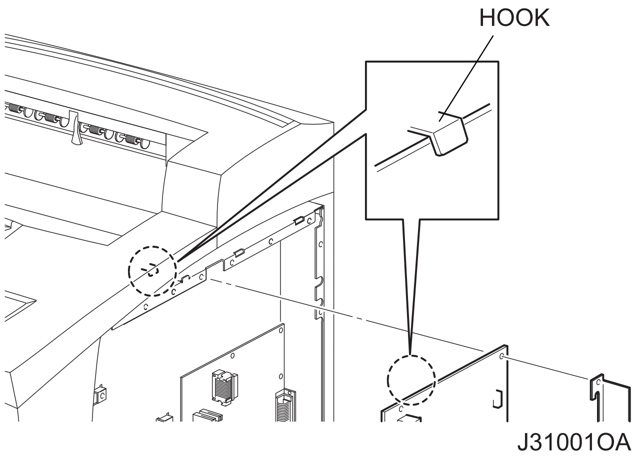
3.5.0.16 FIP2.16 CLUTCH ASSY PH (PL5.1.21, PL7.1.20)

Step	Check	Yes	No
	Possible causative parts: CLUTCH ASSY PH (PL5.1.21, PL7.1.20) HARNESS ASSY TRAY2 (PL7.1.36) HARNESS ASSY CHUTE (PL12.1.17) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5)		
1	Checking HARNESS ASSY CHUTE for continuity Disconnect P/J24 from HVPS/MCU. Are the following continuous normally? J24-13 <=> J242-1 J24-12 <=> J242-2 J24-5 <=> J248-1 J24-4 <=> J248-2	Tray 1 Go to step 3. Tray 2 Go to step 2.	Replace HARNESS ASSY CHUTE.
2	Checking HARNESS ASSY TRAY2 for continuity Remove CLUTCH ASSY PH. Disconnect P/J248. Are the following continuous normally? P/J248-5 <=> P/J247-1 P/J248-4 <=> P/J247-2	Go to step 3.	Replace HARNESS ASSY TRAY1 or TRAY2.
3	Checking the resistance of CLUTCH ASSY PH Is each resistance of the wire wound resistor between P/J242-1 <=> P/J242-2, and P/J247-1 <=> P/J247-2 of CLUTCH ASSY PH, 172 ohm +/-10% (at 20 °C)?	Go to step 4.	Replace CLUTCH ASSY PH. (RRP5.6, 7.5)
4	Checking HVPS/MCU for continuity Disconnect P/J24 and P/J10 from HVPS/MCU. Are the following continuous normally? J24-12 <=> J10-1 J24-4 <=> J10-1	Go to FIP2.1 LVPS.	Replace HVPS/MCU. (RRP12.10)

3.5.0.17 FIP2.17 GUIDE TRAY LEFT (PL7.1.7)

Step	Check	Yes	No
	Possible causative parts: GUIDE TRAY LEFT (PL7.1.7) HARNESS ASSY LVPS (PL12.1.1) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5)		
1	Checking HARNESS ASSY LVPS for continuity Disconnect P/J18 from HVPS/MCU. Disconnect P/J1821. Is each cable between J18 <=> J1821 continuous?	Go to step 2.	Replace HARNESS ASSY LVPS.
2	Checking GUIDE TRAY LEFT for continuity Is each cable between Tray1 Size Switch <=> J1821, and Tray2 Size Switch <=> J1821 of GUIDE TRAY LEFT continuous?	Go to FIP2.18 HVPS/MCU.	Replace GUIDE TRAY LEFT. (RRP7.8)

3.5.0.18 FIP2.18 HVPS/MCU (PL12.1.19)

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) GUIDE ASSY CRU R (PL8.1.25) EP CARTRIDGE HARNESS ASSY CRUM (PL8.1.35) HARNESS ASSY LVPS (PL12.1.1)		
1	Checking the power by GUIDE ASSY CRU R Is GUIDE ASSY CRU R installed appropriately? Does the conducting part of GUIDE ASSY CRU R contact with the plate of HVPS/MCU and EP CARTRIDGE appropriately? Confirm whether HVPS/MCU is assembled under the hook of FRAME. 	Go to step 2.	Replace GUIDE ASSY CRU R. (RRP8.13) Work over the installation of HVPS/MCU again. (RRP12.10)
2	Checking GUIDE ASSY CRU R Remove GUIDE ASSY CRU R. (RRP8.13) Is the Plate Earth of GUIDE ASSY CRU R damaged or soiled?	Go to step 3.	Replace GUIDE ASSY CRU R. (RRP8.13)
3	Checking 24 V to HVPS/MCU Remove EP CARTRIDGE. Is the voltage across P/J10-1 <=> P/J10-4 on HVPS/MCU, 24 VDC?	Go to step 5.	Go to step 4.
4	Checking HARNESS ASSY LVPS for continuity Disconnect P/J10 from HVPS/MCU. Disconnect P/J42 from LVPS. Is P/J10 <=> P/J42 continuous normally?	Go to FIP2.1 LVPS.	Replace HARNESS ASSY LVPS.

Step	Check	Yes	No
5	Checking HARNESS ASSY CRUM for continuity Disconnect P/J15 from HVPS/MCU. Is J15 <=> J150 continuous normally?	Replace HVPS/MCU. (RRP12.10)	Replace HARNESS ASSY CRUM. (RRP8.15)

3.5.0.19 FIP2.19 Electrical Noise

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) GUIDE ASSY CRU R (PL8.1.25) FUSER ASSY (PL8.1.20) EP CARTRIDGE HARNESS ASSY CRUM (PL8.1.35) HARNESS ASSY AC100V/200V (PL12.1.8) HARNESS ASSY LVPS (PL12.1.1) Option 550 Paper Feeder PWBA FEEDER 550 (PL20.1.34) PWBA DUPLEX (PL21.1.32)		
1	Checking a foreign noise Are there any other electrical appliances within 3 m of the printer, such as generators, radios and appliances with motors? Either turn off the other electrical appliances, or re-locate the printer at least 6 m from other appliances. Does the electrical noise problem still occur?	Go to step 2.	End of work
2	Checking AC ground Is AC power supply outlet wired and grounded appropriately?	Go to step 3.	Request the client to fix AC power supply outlet.
3	Checking HARNESS ASSY AC100V/200V Is the cable connected to HARNESS ASSY AC100V/200V appropriately grounded?	Go to step 4.	Install the ground screw appropriately.
4	Checking after replacing EP CARTRIDGE Replace EP CARTRIDGE. Does the electrical noise problem still occur, after replacement?	Go to step 5.	End of work
5	Checking GUIDE ASSY CRU R (1) Does the Plate Earth of GUIDE ASSY CRU R contact terminals on HVPS/MCU appropriately?	Go to step 6.	Replace GUIDE ASSY CRU R. (RRP8.13)
6	Checking GUIDE ASSY CRU R (2) Remove EP CARTRIDGE. Remove GUIDE ASSY CRU R. (RRP8.13) Is the Plate Earth of GUIDE ASSY CRU R normal and not damaged or solid, or there is no disturbing object?	Go to step 7.	Clean the plate or replace GUIDE ASSY CRU R. (RRP8.13)
7	Checking HARNESS ASSY CRUM for continuity Disconnect P/J15 from HVPS/MCU. Is J15 <=> J150 continuous normally?	Go to step 8.	Replace HARNESS ASSY CRUM. (RRP8.15)

Step	Check	Yes	No
8	Checking PWB ground Remove SHIELD PLATE LVPS (PL12.1.3) and SHIELD PLATE HVPS (PL12.1.8). (RRP12.1, 12.9) Is the ground normal? Are screws for ground of the following PWBs firmly tightened? All screws of HVPS/MCU (PL12.1.19) All screws of LVPS (PL12.1.5) When Option 550 Paper Feeder is installed: Are screws of PWBA FEEDER 550 firmly tightened? When Option Duplex is installed: Are screws of PWBA DUPLEX firmly tightened? When Option OCT is installed: Are screws of PWBA OCT firmly tightened?	Go to step 9.	Restore the inappropriate ground.
9	Checking after replacing FUSER ASSY **Warning; Start the operation after the FUSER ASSY have cooled down.** Replace FUSER ASSY. (RRP8.8) Does the problem still occur, after replacement?	Go to step 10.	End of work
10	Checking after replacing HVPS/MCU Replace HVPS/MCU. (RRP12.10) Does the problem still occur, after replacement?	Replace all related parts.	End of work

3.5.0.20 FIP2.44 MOTOR ASSY EXIT (PL10.1.15)

Step	Check	Yes	No
	Possible causative parts: MOTOR ASSY EXIT (PL10.1.15) HARNESS ASSY LVPS (PL12.1.1) PWBA EXIT MOTOR (PL12.1.4) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5)		
1	Checking MOTOR ASSY EXIT. Not using DIAG tool: Replace MOTOR ASSY EXIT. (RRP10.5) Is the problem cleared?	End of work	Go to step 3.
	Using DIAG tool: Does the MOTOR ASSY EXIT rotate? Checks by Chapter 2 Diagnostic: [Exit Motor, Clockwise Test] [Exit Motor, Counterclockwise, High Speed Test] [Exit Motor, Counterclockwise, Low Speed Test]	End of work	Go to step 2.
2	Checking MOTOR ASSY EXIT Replace MOTOR ASSY EXIT. (RRP10.5) Is the problem cleared?	End of work	Go to step 3.
3	Checking HARNESS ASSY LVPS for continuity Disconnect P/J27, P/J10, P/J102 and P/J101 of HARNESS ASSY LVPS. Are the following continuous normally? J27 <=> J102	Go to step 4.	Replace HARNESS ASSY LVPS.
4	Checking the power to MOTOR ASSY EXIT Disconnect P/J101 from PWBA EXIT MOTOR. Is the voltage across J101-2 <=> J101-1, 24 VDC?	Go to step 5.	Replace LVPS. (RRP12.3)
5	Checking PWBA EXIT MOTOR Replace PWBA EXIT MOTOR. (RRP12.2) Is the problem cleared, after replacement?	End of work	Replace HVPS/MCU. (RRP12.10)

3.5.0.21 FIP2.45 SENSOR FACE UP OPEN (PL10.1.25)

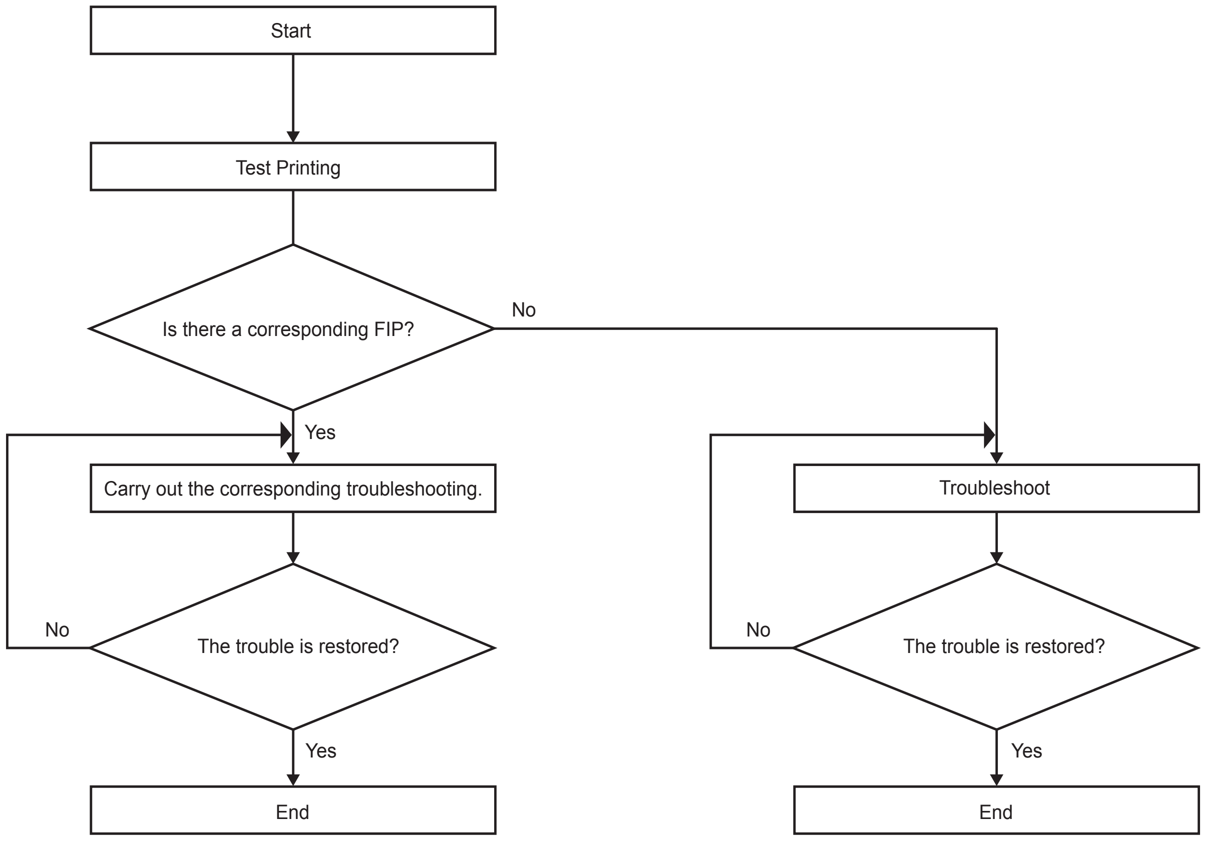
Step	Check	Yes	No
	Possible causative parts: SENSOR FACE UP OPEN (PL10.1.25) GATE FU (PL10.2.6) LEVER GATE FU (PL10.2.17) HARNESS ASSY EXIT SNR (PL10.1.27) HVPS/MCU (PL12.1.19)		
1	Checking GATE FU for operation Open COVER ASSY REAR 500. Move LEVER GATE FU up and down. Does GATE FU operate smoothly? Does the actuator go into the sensor detecting point when LEVER GATE FU is moved up, and out of the detecting point when down?	With tool Go to step 2. Without tool Go to step 3.	Replace LEVER GATE FU and GATE FU.
2	Checking SENSOR FACE UP OPEN for operation (1) Remove EP CARTRIDGE. Close COVER ASSY REAR 500. Move LEVER GATE FU up and down. Does the number increase one by one, every time LEVER GATE FU operates? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to step 3.
3	Checking HARNESS ASSY EXIT SNR for continuity Remove 500 EXIT ASSY (PL10.1.2) (RRP10.2) Remove HARNESS ASSY EXIT SNR. Are the following continuous normally? J29-4 <=> J291-3 J29-5 <=> J291-2 J29-6 <=> J291-1	Go to step 4.	Replace HARNESS ASSY EXIT SNR.
4	Checking SENSOR FACE UP OPEN for operation Replace SENSOR FACE UP OPEN. (RRP10.6) Is the problem cleared?	End of work	Replace HVPS/MCU. (RRP12.10)

3.5.0.22 FIP2.46 SENSOR FULL STACK (PL10.1.26)

Step	Check	Yes	No
	Possible causative parts: SENSOR FULL STACK (PL10.1.26) ACTUATOR FULL STACK (PL10.1.10) HARNESS ASSY EXIT SNR (PL10.1.27) HVPS/MCU (PL12.1.19)		
1	Checking ACTUATOR FULL STACK Open COVER ASSY REAR 500. Move ACTUATOR FULL STACK with a finger. Does ACTUATOR FULL STACK operate smoothly? Does the flag go into the sensor detecting point when there is low paper, and out of the detecting point when full?	With tool Go to step 2. Without tool Go to step 3.	Replace ACTUATOR FULL STACK.
2	Checking SENSOR FULL STACK (1) Remove EP CARTRIDGE. Close COVER ASSY REAR 500. Move ACTUATOR FULL STACK up and down. Does the number increase one by one, every time ACTUATOR FULL STACK operates? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to step 3.
3	Checking HARNESS ASSY EXIT SNR for continuity Remove 500 EXIT ASSY (PL10.1.2) (RRP10.2) Remove HARNESS ASSY EXIT SNR. Are the following continuous normally? J29-1 <=> J290-3 J29-2 <=> J290-2 J29-3 <=> J290-1	Go to step 4.	Replace HARNESS ASSY EXIT SNR.
4	Checking SENSOR FULL STACK (2) Replace SENSOR FULL STACK. (RRP10.7) Is the problem cleared?	End of work	Replace HVPS/MCU. (RRP12.10)

3.6 Image Quality Trouble

3.6.1 Entry Chart for Image Quality Troubleshooting


Start
Test Printing
Is there a corresponding FIP?
No
Yes
Carry out the corresponding troubleshooting.
Troubleshoot
No
The trouble is restored?
No
The trouble is restored?
Yes
Yes
End
End

JG54A5AA

NOTE

It is stated as the Printer Controller is normal. By operating test print with the engine only, if the trouble is on Printer Controller side or the engine side can simply be diagnosed, except those phenomena that are not able to be diagnosed by test print.

- **Test print result with the engine only is normal. ---> Malfunction on Printer Controller side**
- **Test print result with the engine only is also abnormal. ---> Malfunction on the engine side**

When it is the case of [Malfunction on Printer Controller side], replace with normal Printer Controller and normal Interface Cable, and check.
When the trouble still occurs after replacement, check the host side, and then operate Troubleshooting efficiently, using the following image quality FIP according to each phenomenon.

When the image quality trouble of print occurs, get a print to judge, understand and treat the trouble substance precisely and appropriately, and then troubleshoot efficiently, using the image quality FIP table according to each phenomenon.
When trouble restoration with image quality FIP is not possible, check again with the image quality FIP, and then replace [ESS and possible causative parts] in order and check, and operate Troubleshooting, using [Chapter 2 Diagnostic].

Image quality FIP states regarding the typical image quality trouble, as follows.

- FIP-1.P1	Faint print (Low contrast)
- FIP-1.P2	Blank print (No print)
- FIP-1.P3	Solid black
- FIP-1.P4	Vertical blank lines (White stripes in paper transport direction)
- FIP-1.P5	Horizontal band cross out
- FIP-1.P6	Vertical stripes
- FIP-1.P7	Horizontal stripes
- FIP-1.P8	Partial lack
- FIP-1.P9	Spots
- FIP-1.P10	Afterimage
- FIP-1.P11	Background (Fog)
- FIP-1.P12	Skew
- FIP-1.P13	Paper damage
- FIP-1.P14	No fix

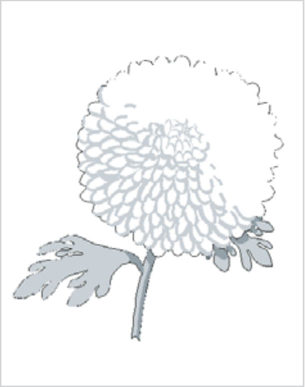
NOTE

When horizontal lines and/or spot occur periodically, it is possibly caused by the trouble of a particular roll. In this case, measure the trouble interval on the test print, and check the relation to the roll in the table below. The interval does not necessarily match circumference of the roll. The trouble may be solved easily by the check.

Roll	Parts name	PL No.	Roll diameter (mm)	Interval (mm)
Drum	EP CARTRIDGE	-	30.5	94.3
BTR	BTR ASSY	PL8.1	16.2	50.7
Heat Roll	FUSER ASSY	PL8.1	24.9	78.3
Pressure Roll	FUSER ASSY	PL8.1	30	94.2

3.7 Image Quality FIP

3.7.1 FIP-1.P1 Faint print (Low contrast)



SCO001F

Trouble substance
The density of the image is entirely too faint.

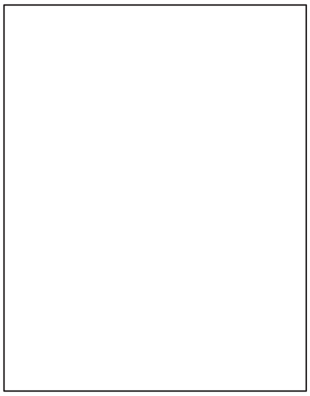
ESS and possible causative parts
- EP CARTRIDGE
- GUIDE ASSY CRU R (PL8.1.25)
- BTR ASSY (PL8.1.21)
- 150 FEEDER ASSY (PL5.1.1)
- PWBA ESS (PL12.1.13)
- ROS ASSY (PL8.1.1)
- FUSER ASSY (PL8.1.20)
- LVPS (PL12.1.5)
- HVPS/MCU (PL12.1.19)
- 550 FEEDER ASSY (PL7.1.10)

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Checking the paper condition Have new, dry and recommended paper on, and operate Test Print. Is the density of the image normal?	End of work	Go to step 2.
2	Checking the laser beam course Make sure there is no obstacle between ROS ASSY and Drum. Check if any stains on ROS ASSY window. Are there any obstacles on the laser beam course? Is ROS ASSY window clean?	Go to step 3.	Remove obstacles and/or clean ROS ASSY window.
3	Checking EP CARTRIDGE Install a new EP CARTRIDGE. Re-print the problem image. Is the image density normal?	End of work	Go to step 4.
4	Checking BTR ASSY Remove BTR ASSY. (RRP8.10) Check if any stains and/or wear on BTR ASSY. Are there any stains and/or wear on BTR?	Go to step 5.	Replace BTR ASSY. (RRP8.10)

Step	Check	Yes	No
5	Checking the drum ground Remove GUIDE ASSY CRU R. (RRP8.13) Check the Plate Earth, located on the back of GUIDE ASSY CRU R. Is the Plate Earth stained and/or deformed?	Go to step 6.	Reform or clean the Plate Earth, or replace GUIDE ASSYCRU R. (RRP8.13)
6	Checking HVPS/MCU Replace HVPS/MCU. (RRP12.10) Carry out a test printing Is the problem cleared?	End of work	Go to step 7.
7	Checking the image development process Operate Test Print, and turn off the power of the printer while printing. Remove the EP CARTRIDGE with care, and check the toner image formed on the drum, right before the transcribe part (BTR). Is the image on the drum completely formed? Is the area clear and black, and easily read?	Go to step 8.	Go to FIP2.18 HVPS/MCU.
8	Checking the image transcribe process Check the toner image formed on the drum, right after the transcribe part (BTR). Is the toner image on the drum completely transcribed on the paper?	Go to step [ESS and possible causative parts].	Go to FIP2.18 HVPS/MCU.

3.7.2 FIP-1.P2 Blank print (No print)



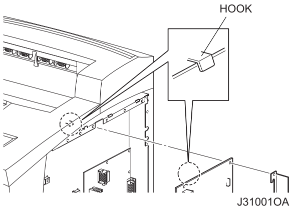
SCO002F

Trouble substance
The entire paper is printed pure white.

ESS and possible causative parts

- EP CARTRIDGE
- GUIDE ASSY CRU R (PL8.1.25)
- BTR ASSY (PL8.1.21)
- 150 FEEDER ASSY (PL5.1.1)
- ROS ASSY (PL8.1.1)
- PWBA ESS (PL12.1.13)
- FUSER ASSY (PL8.1.20)
- LVPS (PL12.1.5)
- HVPS/MCU (PL12.1.19)
- 550 FEEDER ASSY (PL7.1.10)

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Confirm whether HVPS/MCU is assembled under the hook of FRAME. 	Go to step 2.	Work over the installation of HVPS/MCU again. (RRP12.10)
2	Checking the laser beam course Make sure there is no obstacle between ROS ASSY and Drum. Are there any obstacles on the laser beam course?	Go to step 3.	Remove obstacles.
3	Checking ROS ASSY Check if any obstacles entirely cover the ROS ASSY window. Check if the connectors of the ROS ASSY are disconnected.	Go to step 4.	Remove obstacles of ROS ASSY window and/or connect the connectors of ROS ASSY.
4	Checking EP CARTRIDGE Install a new EP CARTRIDGE. Re-print the problem image. Is the image density normal?	End of work	Go to step 5.

Step	Check	Yes	No
5	Checking BTR ASSY Remove BTR ASSY. (RRP8.10) Check if any stains and/or wear on BTR ASSY. Are there any stains and/or wear on BTR?	Go to step 6.	Replace BTR ASSY. (RRP8.10)
6	Checking the image development process Operate Test Print, and turn off the power of the printer while printing. Remove the EP CARTRIDGE with care, and check the toner image formed on the drum, right before the transcribe part (BTR). Is the image on the drum completely formed? Is the area clear and black, and easily read?	Go to step 7.	Go to FIP2.18 HVPS/MCU.
7	Checking the image transcribe process Check the toner image formed on the drum, right after the transcribe part (BTR). Is the toner image on the drum completely transcribed on the paper?	Go to step [ESS and possible causative parts].	Go to FIP2.18 HVPS/MCU.

3.7.3 FIP-1.P3 Solid black

SCO003F

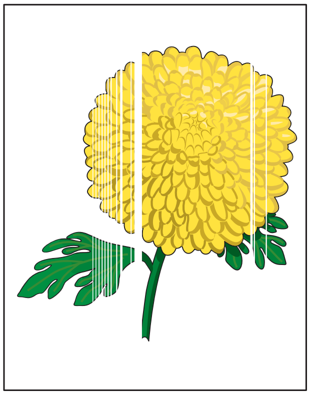
Trouble substance
The entire paper is printed jet-black.

ESS and possible causative parts
- EP CARTRIDGE
- HVPS/MCU (PL12.1.19)
- LVPS (PL12.1.5)
- 150 FEEDER ASSY (PL5.1.1)
- ROS ASSY (PL8.1.1)
- PWBA ESS (PL12.1.13)
- 550 FEEDER ASSY (PL7.1.10)

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Checking EP CARTRIDGE Install a new EP CARTRIDGE. Carry out a test printing. Is the print normal?	End of work	Go to step 2.
2	Checking HVPS/MCU Cover entire ROS ASSY window. Carry out a test printing. Is the print black?	Go to FIP2.18 HVPS/MCU.	Go to step 3.
3	Checking ROS ASSY Cover a half of ROS ASSY window. Carry out a test printing. Is the print half white and half black? Is the print black?	Go to FIP2.3 ROS ASSY.	Replace HVPS/MCU. (RRP12.10)

3.7.4 FIP-1.P4 Vertical blank lines (White stripes in paper transport direction)



SCO004F

Trouble substance
There are some extremely faint or completely non-printed parts. Those non-printed parts cover a wide area vertically, along the paper feeding direction.

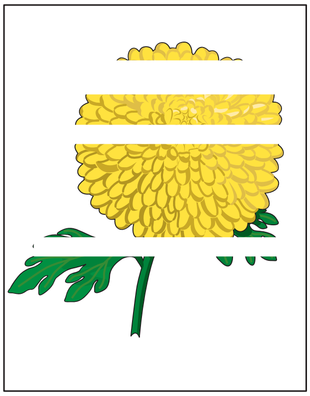
ESS and possible causative parts
- EP CARTRIDGE
- BTR ASSY (PL8.1.21)
- 150 FEEDER ASSY (PL5.1.1)
- ROS ASSY (PL8.1.1)
- PWBA ESS (PL12.1.13)
- FUSER ASSY (PL8.1.20)
- Heat Roll
- Pressure Roll
- 550 FEEDER ASSY (PL7.1.10)

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Checking the paper condition Have new, dry and recommended paper on. Re-print the problem image. Does the problem still occur?	Go to step 2.	End of work
2	Checking the paper transfer course Check if there are any stains or obstacles on the paper transfer course between the paper feeding entrance and the exit. Are there any obstacles on the paper transfer course?	Go to step 3.	Remove the obstacles or stains from the paper transfer course.
3	Checking the laser beam course Make sure there is no obstacle between ROS ASSY and Drum. Are there any obstacles on the laser beam course? Check if any stains on ROS ASSY window.	Go to step 4.	Remove all the obstacles from the laser beam course and/or clean ROS ASSY window.
4	Checking EP CARTRIDGE Install a new EP CARTRIDGE. Re-print the problem image. Does the problem still occur?	Go to step 5.	End of work

Step	Check	Yes	No
5	Checking BTR ASSY (PL8.1.21) Remove BTR ASSY. (RRP8.10) Check if any stains and/or wear on BTR ASSY. Are there any stains and/or wear on BTR?	Go to step 6.	Replace BTR ASSY. (RRP8.10)
6	Checking Heat Roll and Pressure Roll Remove FUSER ASSY. (RRP8.8) **Warning; Start the operation after the FUSER ASSY have cooled down.** Turn the Gear HR with a finger, and check the Heat Roll and Pressure Roll. Are the Heat Roll and Pressure Roll damaged or stained?	Go to step [ESS and possible causative parts].	Replace FUSER ASSY. (RRP8.8)

3.7.5 FIP-1.P5 Horizontal band cross out


SCO005F

Trouble substance
There are some extremely faint or completely non-printed parts. Those non-printed parts cover a wide area horizontally, perpendicular to the paper feeding direction.

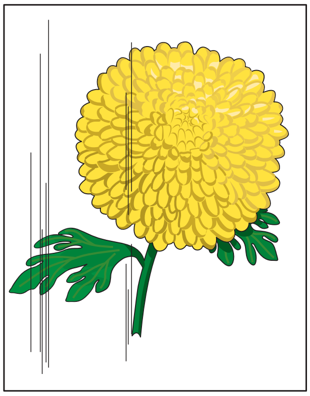
ESS and possible causative parts
- EP CARTRIDGE
- HVPS/MCU (PL12.1.19)
- GUIDE ASSY CRU R (PL8.1.25)
- BTR ASSY (PL8.1.21)
- 150 FEEDER ASSY (PL5.1.1)
- ROS ASSY (PL8.1.1)
- PWBA ESS (PL12.1.13)
- FUSER ASSY (PL8.1.20)
- Heat Roll
- Pressure Roll
- MAIN MOTOR (PL11.1.2)
- GEAR ASSY HOUSING (PL11.1.3)
- CLUTCH REGI (PL5.1.23)
- 550 FEEDER ASSY (PL7.1.10)

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Checking the paper condition Have new, dry and recommended paper on. Re-print the problem image. Does the problem still occur?	Go to step 2.	End of work
2	Checking EP CARTRIDGE Install new EP CARTRIDGE. Has the horizontal band cross out gone?	End of work	Go to step3.
3	Checking BTR ASSY Remove BTR ASSY. (RRP8.10) Check if any stains and/or wear on BTR ASSY. Are there any stains and/or wear on BTR?	Go to step 4.	Replace BTR ASSY. (RRP8.10)
4	Checking ROS ASSY Are the connectors on ROS ASSY surely connected?	Go to step 5.	Reconnect the connectors.

Step	Check	Yes	No
5	Checking the image development process Operate Test Print, and turn off the power of the printer while printing. Remove the EP CARTRIDGE with care, and check the toner image formed on the drum, right before the transcribe part (BTR). Is the image on the drum completely formed? Is the area clear and black, and easily read? Has the horizontal band cross out gone?	Go to step 6.	Go to FIP2.18 HVPS/MCU.
6	Checking the image transcribe process Check the toner image formed on the drum, right after the transcribe part (BTR). Is the toner image on the drum completely transcribed on the paper?	Go to step 7.	Go to FIP2.18 HVPS/MCU.
7	Checking Drive Assy and GEAR ASSY HOUSING Replace Drive Assy and GEAR ASSY HOUSING. (RRP11.3) Re-print the problem image. Does the problem still occur?	Go to step 8.	End of work
8	Checking Heat Roll and Pressure Roll Remove FUSER ASSY. (RRP8.8) **Warning; Start the operation after the FUSER ASSY have cooled down.** Turn the Gear HR with a finger, and check the Heat Roll and Pressure Roll. Are the Heat Roll and Pressure Roll damaged or stained?	Go to step [ESS and possible causative parts].	Replace FUSER ASSY. (RRP8.8)

3.7.6 FIP-1.P6 Vertical stripes



SCO006F

Trouble substance
There are vertical black stripes along the paper.

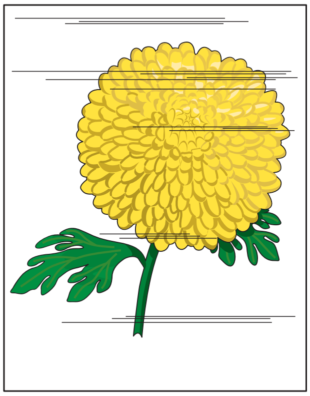
ESS and possible causative parts
- EP CARTRIDGE
- HVPS/MCU (PL12.1.19)
- GUIDE ASSY CRU R (PL8.1.25)
- BTR ASSY (PL8.1.21)
- 150 FEEDER ASSY (PL5.1.1)
- ROS ASSY (PL8.1.1)
- PWBA ESS (PL12.1.13)
- 550 FEEDER ASSY (PL7.1.10)

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Check the paper transfer course. Check if there are any stains or obstacles on the paper transfer course between the paper feeding entrance and the exit. Are there any obstacles on the paper transfer course?	Go to step 2.	Remove the obstacles or stains from the paper transfer course.
2	Checking the laser beam course Make sure there is no obstacle between ROS ASSY and Drum. Are there any obstacles on the laser beam course? Check if any stains on ROS ASSY window.	Go to step 3.	Remove all the obstacles from the laser beam course and/or clean ROS ASSY window.
3	Checking EP CARTRIDGE Install a new EP CARTRIDGE. Carry out a test printing. Have the vertical black stripes gone?	End of work	Go to step 4.
4	Checking BTR ASSY Remove BTR ASSY. (RRP8.10) Check if any stains and/or wear on BTR ASSY. Are there any stains and/or wear on BTR?	Go to step 5.	Replace BTR ASSY. (RRP8.10)
5	Checking ROS ASSY Are the connectors on ROS ASSY surely connected?	Go to step 6.	Reconnect the connectors.

Step	Check	Yes	No
6	Checking Heat Roll and Pressure Roll Remove FUSER ASSY. (RRP8.8) **Warning; Start the operation after the FUSER ASSY have cooled down.** Turn the Gear HR with a finger, and check the Heat Roll and Pressure Roll. Are the Heat Roll and Pressure Roll damaged or stained?	Go to FIP2.19 Electrical Noise.	Replace FUSER ASSY. (RRP8.8)

3.7.7 FIP-1.P7 Horizontal stripes



SCO007F

Trouble substance
There are horizontal black stripes along the paper.

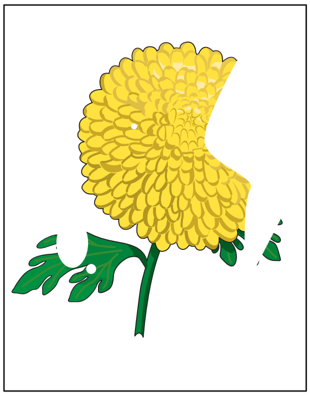
ESS and possible causative parts
- EP CARTRIDGE
- HVPS/MCU (PL12.1.19)
- GUIDE ASSY CRU R (PL8.1.25)
- BTR ASSY (PL8.1.21)
- 150 FEEDER ASSY (PL5.1.1)
- MAIN MOTOR (PL11.1.2)
- GEAR ASSY HOUSING (PL11.1.3)
- ROS ASSY (PL8.1.1)
- PWBA ESS (PL12.1.13)
- LVPS (PL12.1.5)
- 550 FEEDER ASSY (PL7.1.10)

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Checking EP CARTRIDGE Install a new EP CARTRIDGE. Re-print the problem image. Have the horizontal black stripes gone?	End of work.	Go to step 2
2	Checking ROS ASSY Are the connectors on ROS ASSY surely connected? Is the ROS ASSY surely secured to the frame?	Go to step 3.	Reconnect the connectors and/or reinstall the ROS ASSY.
3	Checking Drive Assy and GEAR ASSY HOUSING Replace Drive Assy and GEAR ASSY HOUSING. (RRP11.3) Re-print the problem image. Does the problem still occur?	Go to step 4.	End of work
4	Checking GUIDE ASSU CRU R for continuity Remove EP CARTRIDGE. Check if there are any deformation or stains on the plate of GUIDE ASSY CRU R. Check the continuity of the plate of GUIDE ASSY CRU R. Are there any deformation or stains on the plate of GUIDE ASSY CRU R, and does it continuous?	Go to step 5.	Replace GUIDE ASSY CRU R. (RRP8.13)

Step	Check	Yes	No
5	Checking connection of GUIDE ASY CRU R Check the contact of the plate of GUIDE ASSY CRU R with the terminal on HVPS/MCU. Does the plate of GUIDE ASSY CRU R correctly contact with the terminal on HVPS/MCU?	Go to step 6.	Replace GUIDE ASSY CRU R. (RRP8.13)
6	Checking Drum ground Check the Plate Earth of GUIDE ASSY CRU R. Are there any stains or deformation on the Plate Earth?	Go to step 7.	Restore or clean the Plate Earth, or replace GUIDE ASSY CRU R. (RRP8.13)
7	Checking BTR ASSY Remove BTR ASSY. (RRP8.10) Check if any stains and/or wear on BTR ASSY. Are there any stains and/or wear on BTR?	Go to step 8.	Replace BTR ASSY. (RRP8.10)
8	Checking the image development process Operate Test Print, and turn off the power of the printer while printing. Remove the EP CARTRIDGE with care, and check the toner image formed on the drum, right before the transcribe part (BTR). Is the image on the drum completely formed? Is the area clear and black, and easily read?	Go to step 9.	Go to FIP2.18 HVPS/MCU.
9	Checking the image transcribe process Check the toner image formed on the drum, right after the transcribe part (BTR). Is the toner image on the drum completely transcribed on the paper?	Go to step 10.	Replace BTR ASSY. (RRP8.10)
10	Checking Heat Roll and Pressure Roll Remove FUSER ASSY. (RRP8.8) **Warning; Start the operation after the FUSER ASSY have cooled down.** Turn the Gear HR with a finger, and check the Heat Roll and Pressure Roll. Are the Heat Roll and Pressure Roll damaged or stained?	Go to step [ESS and possible causative parts].	Replace FUSER ASSY. (RRP8.8)

3.7.8 FIP-1.P8 Partial lack



SCO008F

Trouble substance
There are some extremely faint or completely missing parts. Those missing parts are dotted in a limited area on the paper.

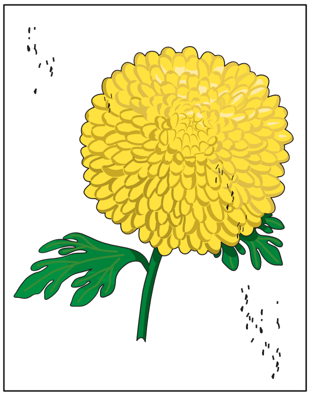
ESS and possible causative parts
- EP CARTRIDGE
- HVPS/MCU (PL12.1.19)
- BTR ASSY (PL8.1.21)
- 150 FEEDER ASSY (PL5.1.1)
- PWBA ESS (PL12.1.13)
- 550 FEEDER ASSY (PL7.1.10)

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Checking the paper condition Have new, dry and recommended paper on. Re-print the problem image. Does the problem still occur?	Go to step 2.	End of work
2	Checking EP CARTRIDGE Install a new EP CARTRIDGE. Re-print the problem image. Does the problem still occur?	Go to step 3.	End of work
3	Checking the image development process Operate Test Print, and turn off the power of the printer while printing. Remove the EP CARTRIDGE with care, and check the toner image formed on the drum, right before the transcribe part (BTR). Is the image on the drum completely formed? Is the area clear and black, and easily read?	Go to step 4.	Go to FIP2.18 HVPS/MCU.
4	Checking the image transcribe process Check the toner image formed on the drum, right after the transcribe part (BTR). Is the toner image on the drum completely transcribed on the paper?	Go to step 5.	Replace BTR ASSY. (RRP8.10)

Step	Check	Yes	No
5	Checking Heat Roll and Pressure Roll Remove FUSER ASSY. (RRP8.8) **Warning; Start the operation after the FUSER ASSY have cooled down.** Turn the Gear HR with a finger, and check the Heat Roll and Pressure Roll. Are the Heat Roll and Pressure Roll damaged or stained?	Go to step [ESS and possible causative parts].	Replace FUSER ASSY. (RRP8.8)

3.7.9 FIP-1.P9 Spots


SCO009F

Trouble substance
There are toner spots all over the paper disorderedly.

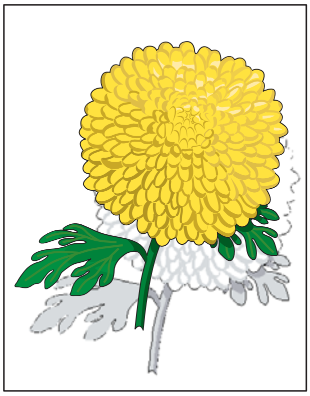
ESS and possible causative parts
- EP CARTRIDGE
- HVPS/MCU (PL12.1.19)
- BTR ASSY (PL8.1.21)
- 150 FEEDER ASSY (PL5.1.1)
- ROS ASSY (PL8.1.1)
- GUIDE ASSY CRU R (PL8.1.25)
- PWBA ESS (PL12.1.13)
- 550 FEEDER ASSY (PL7.1.10)

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Checking EP CARTRIDGE Install a new EP CARTRIDGE. Carry out a test printing. Have the spots gone?	End of work	Go to step 2.
2	Checking BTR ASSY Remove BTR ASSY. (RRP8.10) Check if any stains and/or wear on BTR ASSY. Are there any stains and/or wear on BTR?	Go to step 3.	Replace BTR ASSY. (RRP8.10)
3	Checking ROS ASSY Are the connectors on ROS ASSY surely connected?	Go to step 4.	Reconnect the connectors.
4	Checking the image development process Operate Test Print, and turn off the power of the printer while printing. Remove the EP CARTRIDGE with care, and check the toner image formed on the drum, right before the transcribe part (BTR). Is the image on the drum completely formed? Is the area clear and black, and easily read?	Go to step 5.	Go to FIP2.18 HVPS/MCU.

Step	Check	Yes	No
5	Checking Heat Roll and Pressure Roll Remove FUSER ASSY. (RRP8.8) **Warning; Start the operation after the FUSER ASSY have cooled down.** Turn the Gear HR with a finger, and check the Heat Roll and Pressure Roll. Are the Heat Roll and Pressure Roll damaged or stained?	Go to step [ESS and possible causative parts].	Replace FUSER ASSY. (RRP8.8)

3.7.10 FIP-1.P10 Afterimage



SCO010F

Trouble substance
The ghost appears on the paper. The ghost may be the image of the previous page, or a part of the page currently printing.

ESS and possible causative parts

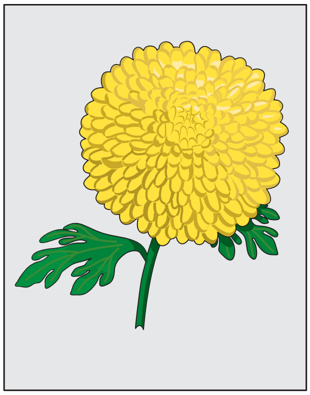
- EP CARTRIDGE
- HVPS/MCU (PL12.1.19)
- GUIDE ASSY CRU R (PL8.1.25)
- Drive Assy
- BTR ASSY (PL8.1.21)
- 150 FEEDER ASSY (PL5.1.1)
- MAIN MOTOR (PL11.1.2)
- GEAR ASSY HOUSING (PL11.1.3)
- PWBA ESS (PL12.1.13)
- FUSER ASSY (PL8.1.20)
- Heat Roll
- Pressure Roll
- 550 FEEDER ASSY (PL7.1.10)

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Checking repeat printing Check the afterimage. Is the client printing a copy of the same image in a large quantity?	Go to step 2.	Go to step 3.
2	Print 30 pages of the image of every kind. Does the afterimage still appear?	Go to step 3.	Don’t make a copy of the same image in a large quantity.
3	Checking the paper condition Have new, dry and recommended paper on. Re-print the problem image. Does the problem still occur?	Go to step 4.	End of work
4	Checking EP CARTRIDGE Install a new EP CARTRIDGE. Re-print the problem image. Does the problem still occur?	Go to step 5.	End of work

Step	Check	Yes	No
5	Checking BTR ASSY Remove BTR ASSY. (RRP8.10) Check if any stains and/or wear on BTR ASSY. Are there any stains and/or wear on BTR?	Go to step 6.	Replace BTR ASSY. (RRP8.10)
6	Checking Heat Roll and Pressure Roll Remove FUSER ASSY. (RRP8.8) **Warning; Start the operation after the FUSER ASSY have cooled down.** Turn the Gear HR with a finger, and check the Heat Roll and Pressure Roll. Are the Heat Roll and Pressure Roll damaged or stained?	Go to step 7.	Replace FUSER ASSY. (RRP8.8)
7	Checking ground of Heat Roll, Pressure Roll and Inlet Chute Check visually, if there are any stains or transformation on the two plates on the left side of FUSER ASSY. Check the continuity between the plate on the left side of FUSER ASSY and the following points. - Back plate <=> Both ends of Heat Roll, without coating (5-10 k-ohm) - Front plate <=> The plate on Inlet Chute left end (1-2 k-ohm) Are the grounding plates of Heat Roll, Pressure Roll and Inlet Chute sound and continuous?	Go to step 8.	Replace FUSER ASSY. (RRP8.8)
8	Checking ground of FUSER ASSY Remove EP CARTRIDGE. Check if there are any stains or deformation on GEAR ASSY HOUSING. Check the continuity between the printer frame and screw on the back of FUSER ASSY. Are there any deformation or stains on GEAR ASSY HOUSING? Is FUSER ASSY grounded?	Go to step [ESS and possible causative parts].	Replace GEAR ASSY HOUSING. (RRP11.3)

3.7.11 FIP-1.P11 Background (Fog)



SCO011F

Trouble substance
There is toner stain all over or a part of the page. The stain appears as very bright gray stain.

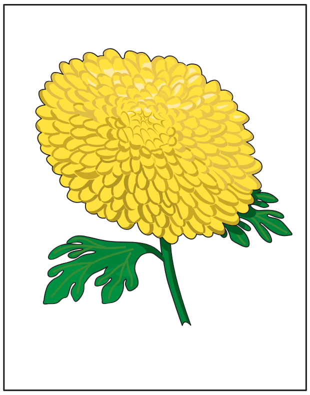
ESS and possible causative parts
- EP CARTRIDGE
- BTR ASSY (PL8.1.21)
- HVPS/MCU (PL12.1.19)
- GUIDE ASSY CRU R (PL8.1.25)
- ROS ASSY (PL8.1.1)
- PWBA ESS (PL12.1.13)
- 150 FEEDER ASSY (PL5.1.1)
- FUSER ASSY (PL8.1.20)
- 550 FEEDER ASSY (PL7.1.10)

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Checking EP CARTRIDGE Install a new EP CARTRIDGE. Carry out a test printing. Have the background gone?	End of work	Go to step 2.
2	Checking the image development process Operate Test Print, and turn off the power of the printer while printing. Remove the EP CARTRIDGE with care, and check the toner image formed on the drum, right before the transcribe part (BTR). Is the image on the drum completely formed? Is the area clear and black, and easily read?	Go to step 3.	Go to FIP2.18 HVPS/MCU
3	Checking ROS ASSY Are the connectors on ROS ASSY surely connected?	Go to step 4.	Reconnect the connectors.
4	Checking 150 FEEDER ASSY ground Remove EP CARTRIDGE. Check the continuity from the front open part between 150 FEEDER ASSY metal part and printer frame metal part. Is 150 FEEDER ASSY grounded?	Go to step 5.	Remove 150 FEEDER ASSY and install again for correct ground. (RRP5.1)

Step	Check	Yes	No
5	Checking FUSER ASSY ground Open COVER REAR (PL1.4). Check the continuity between printer frame and the screw on the back of FUSER ASSY. Is FUSER ASSY grounded?	Go to step [ESS and possible causative parts].	Remove FUSER ASSY and install again. (RRP8.8)

3.7.12 FIP-1.P12 Skew



SCO012F

Trouble substance
The printed image is not paralleled with both sides of the paper.

ESS and possible causative parts
- EP CARTRIDGE
- BTR ASSY (PL8.1.21)
- 150 FEEDER ASSY (PL5.1.1)
- FUSER ASSY (PL8.1.20)
- Paper Cassette
- PLATE ASSY BTM (PL2.1.10, PL4.1.10)
- 150 Paper Feeder
- Option 550 Paper Feeder
- PWBA ESS (PL12.1.13)
- 550 FEEDER ASSY (PL7.1.10)

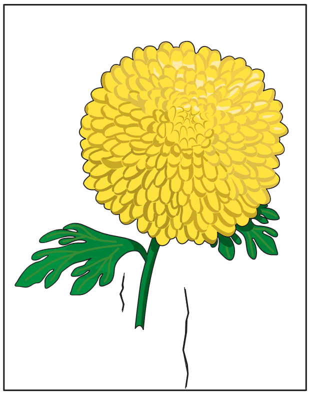
Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Checking the installation place Check if there is any irregularity on the installation place. Check if there is any missing Foot. Is the setup surface normal?	Go to step 2.	Arrange the installation place normally.
2	Checking the paper feeding Remove the Paper Cassette. Insert the paper to the Paper Cassette correctly. Install the Paper Cassette to the printer. Install PLATE ASSY BTM correctly. (not to incline right or left) (RRP2.5 and 4.5) Re-print the problem image. Does the problem still occur?	Go to step 3.	End of work
3	Check the paper transfer course. Check if there are any stains or obstacles on the paper transfer course between the paper feeding tray and the exit tray. Are there any obstacles on the paper transfer course?	Go to step 4.	Remove the obstacles or stains from the paper transfer course.

Step	Check	Yes	No
4	Checking the rolls on the paper transfer course Check all the rolls on the course, where the paper transfer between paper feeding entrance tray and exit tray, and check if there are any stains, wear or damages. Check if the pinch roll rotates freely, and the spring pressure is even. Are there any stains, wear or damages on the rolls in the paper transfer course?	Go to step 5.	Replace the damaged or worn-out rolls. (Refer to corresponding RRPs, for replacement.)
5	Checking EP CARTRIDGE Install a new EP CARTRIDGE. Re-print the problem image. Is the image still skew?	Go to step [ESS and possible causative parts].	End of work

3.7.13 FIP-1.P13 Paper damage

Trouble substance
The paper comes out from the printer crumpled, folded or worn-out.



SCO013F

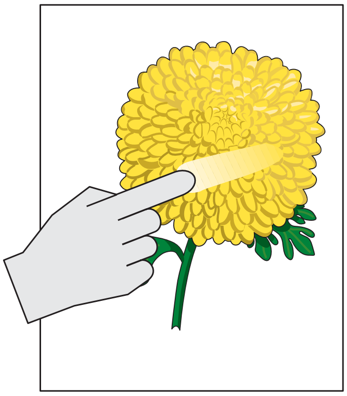
ESS and possible causative parts
- FUSER ASSY (PL8.1.20)
- Heat Roll
- Pressure Roll
- PWBA ESS (PL12.1.13)
- 150 FEEDER ASSY (PL5.1.1)
- EP CARTRIDGE
- BTR ASSY (PL8.1.21)
- Paper Cassette
- PLATE ASSY BTM (PL2.1.10, PL4.1.10)
- 150 Paper Feeder
- 550 FEEDER ASSY (PL7.1.10)
- Option 550 Paper Feeder

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Checking the paper feeding Observe the paper feeding condition. Is the paper fed crooked?	Go to FIP-1.P12 Skew.	Go to step 2.
2	Checking the paper condition Have new, dry and recommended paper on. Carry out a test printing. (Refer to Chapter 2 Diagnostic [TEST PATTERN MODE MENU]. Dose the problem still occur?	Go to step 3.	End of work
3	Check the paper transfer course. Check if there are any stains or obstacles on the paper transfer course between the paper feeding tray and the exit tray. Are there any obstacles on the paper transfer course?	Go to step 4.	Remove the obstacles or stains from the paper transfer course.

Step	Check	Yes	No
4	Checking the rolls on the paper transfer course Check all the rolls on the course, where the paper transfer between paper feeding entrance tray and exit tray, and check if there are any stains, wear or damages. Are there any stains, wear or damages on the rolls in the paper transfer course?	Go to step 5.	Replace the damaged or worn-out rolls.
5	Checking Heat Roll and Pressure Roll Remove FUSER ASSY. (RRP8.8) **Warning; Start the operation after the FUSER ASSY have cooled down.** Turn the Gear HR with a finger, and check the Heat Roll and Pressure Roll. Are the Heat Roll and Pressure Roll damaged or stained?	Go to step 6.	Replace FUSER ASSY. (RRP8.8)
6	Checking EP CARTRIDGE Install a new EP CARTRIDGE. Carry out a test printing. Is the paper still damaged?	Go to step [ESS and possible causative parts].	End of work

3.7.14 FIP-1.P14 No fix

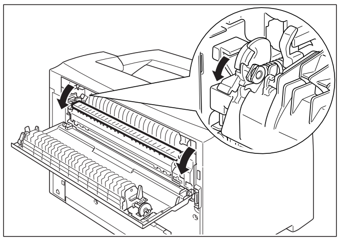


SCO014F

Trouble substance
The printed image is not fixed on the paper properly. The image easily comes off when rubbed.

ESS and possible causative parts
- FUSER ASSY (PL8.1.20)
- Heat Roll
- Pressure Roll
- PWBA ESS (PL12.1.13)
- LVPS (PL12.1.5)

Before commencing troubleshooting, check the paper transfer course. Make sure there is no foreign articles on the transfer course, such as staples, paper clips, scraps of paper and so on.

Step	Check	Yes	No
1	Checking FUSER ASSY installation Check that the levers on both sides of the FUSER ASSY is pushed down, and then re-print the problem image. Does the problem still occur?  J31002OA	Go to step 2.	End of work
2	Checking the paper condition Have new, dry and recommended paper on. Re-print the problem image. Does the problem still occur?	Go to step 3.	End of work
3	Checking Heat Roll and Pressure Roll Remove FUSER ASSY. (RRP8.8) **Warning; Start the operation after the FUSER ASSY have cooled down.** Turn the gear of the heater roller with a finger, and check the Heat Roll and Pressure Roll. Are the Heat Roll and Pressure Roll damaged or stained?	Go to step 4.	Replace FUSER ASSY. (RRP8.8)

Step	Check	Yes	No
4	Checking FUSER ASSY Turn the gear of the Heater Roller with a finger. Check the contact condition of Heat Roll and Pressure Roll when rotating. Do Heat Roll and Pressure Roll contact evenly?	Go to step [ESS and possible causative parts].	Replace FUSER ASSY. (RRP8.8)

3.7.15 Judgment of print consistency

It is stated here how to judge simply the main print consistency printing with the standard paper (letter size).

Keep the paper packaged in the operating environment for 12 hours, and then use the paper just after when unpackaged.

Note

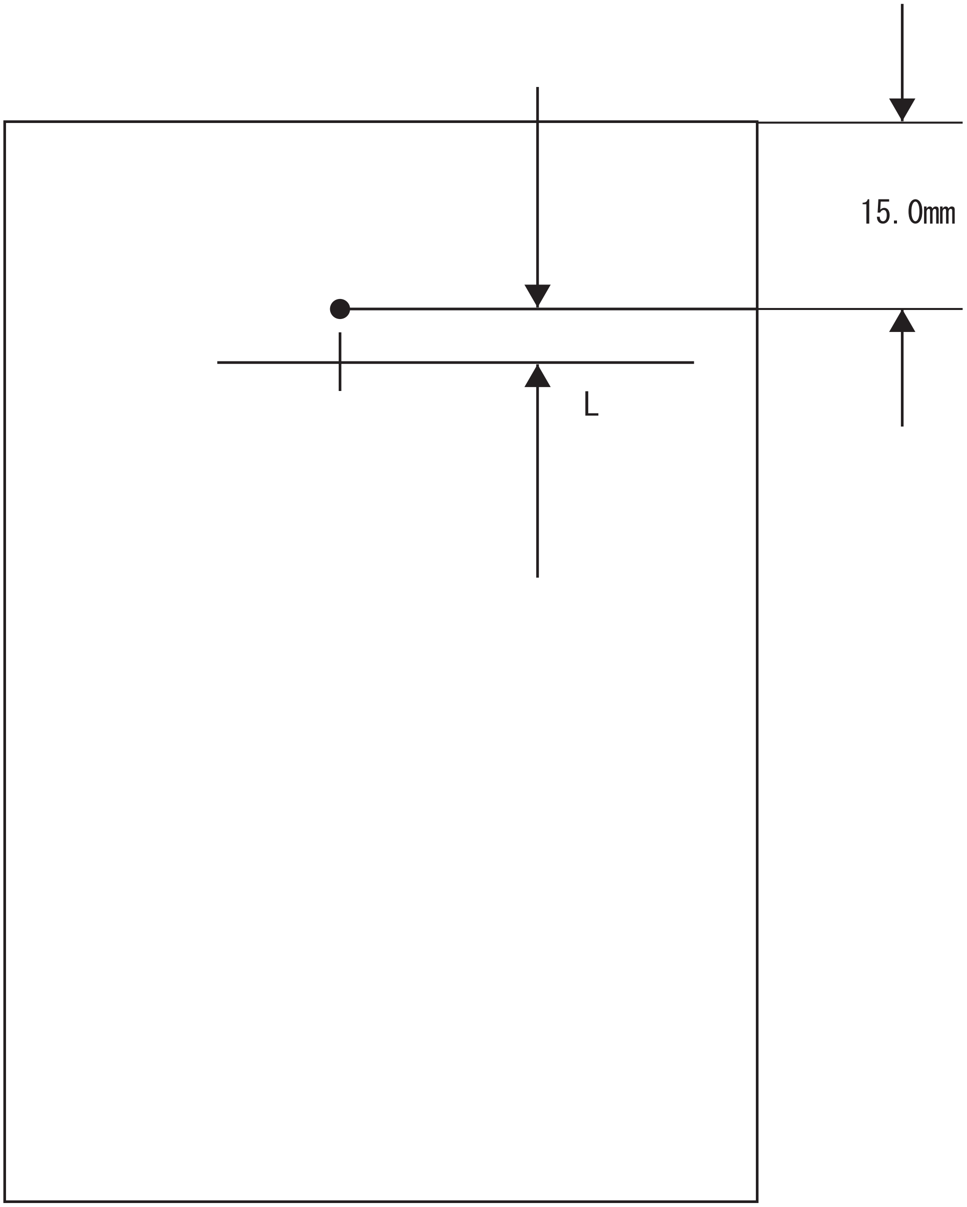
The image quality cannot be evaluated when the machine is faulty.

3.7.16 Leading edge registration

Measurement of the amount of print shift from the ideal position on the paper

Measure the amount of shift from the ideal point 15 mm away from the front end at center of right-and-left of the paper.

Reference: less than +/-2.0 mm



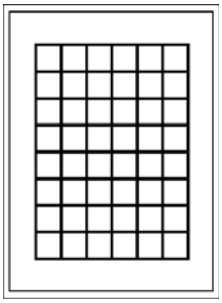
JG54A2AA

3.7.17 Side edge registration

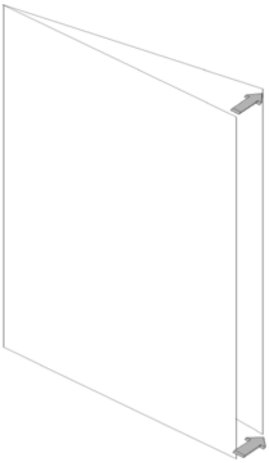
Measure the amount of shift from the ideal point 108.0 mm away from the left end at center of front-and-back of the paper.

Reference: less than +/-2.5 mm

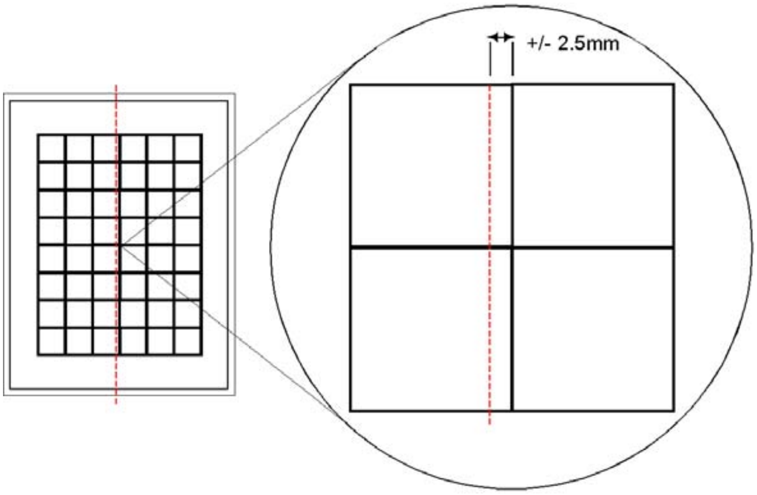
1) Enter Diagnostics (Test Print Chapter 2.3.6), from the Test Print Menu print the Grid Page from the desired paper tray to be checked.



2) Fold the printed Grid Page by aligning the long edges together and fold.



3) Measure from the center line to the folded crease.



Adjustment

1) Enter Diagnostics (Alignment Chapter 2.3.3), from the Alignment Menu select the desired paper tray in the scan direction.

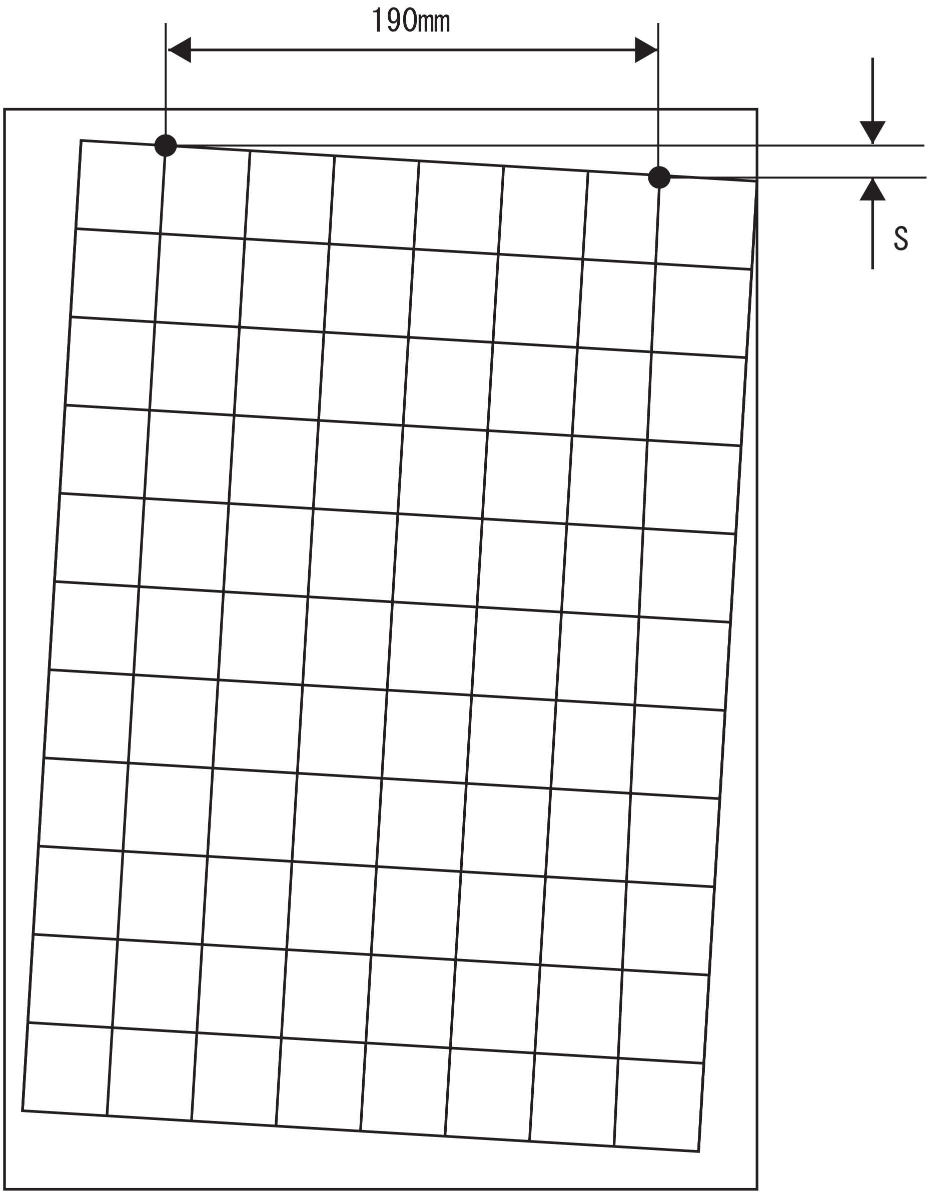
- Increase the value (0-15) if the crease is to the right of the center line.
  Decrease the value (0-15) if the crease is to the left of the center line.

3.7.18 Skew

Measurement of the inclined paper feeding

Measure the vertical distance of two points 190 mm away each other on the top horizontal line.

Reference: less than +/-1.2 mm



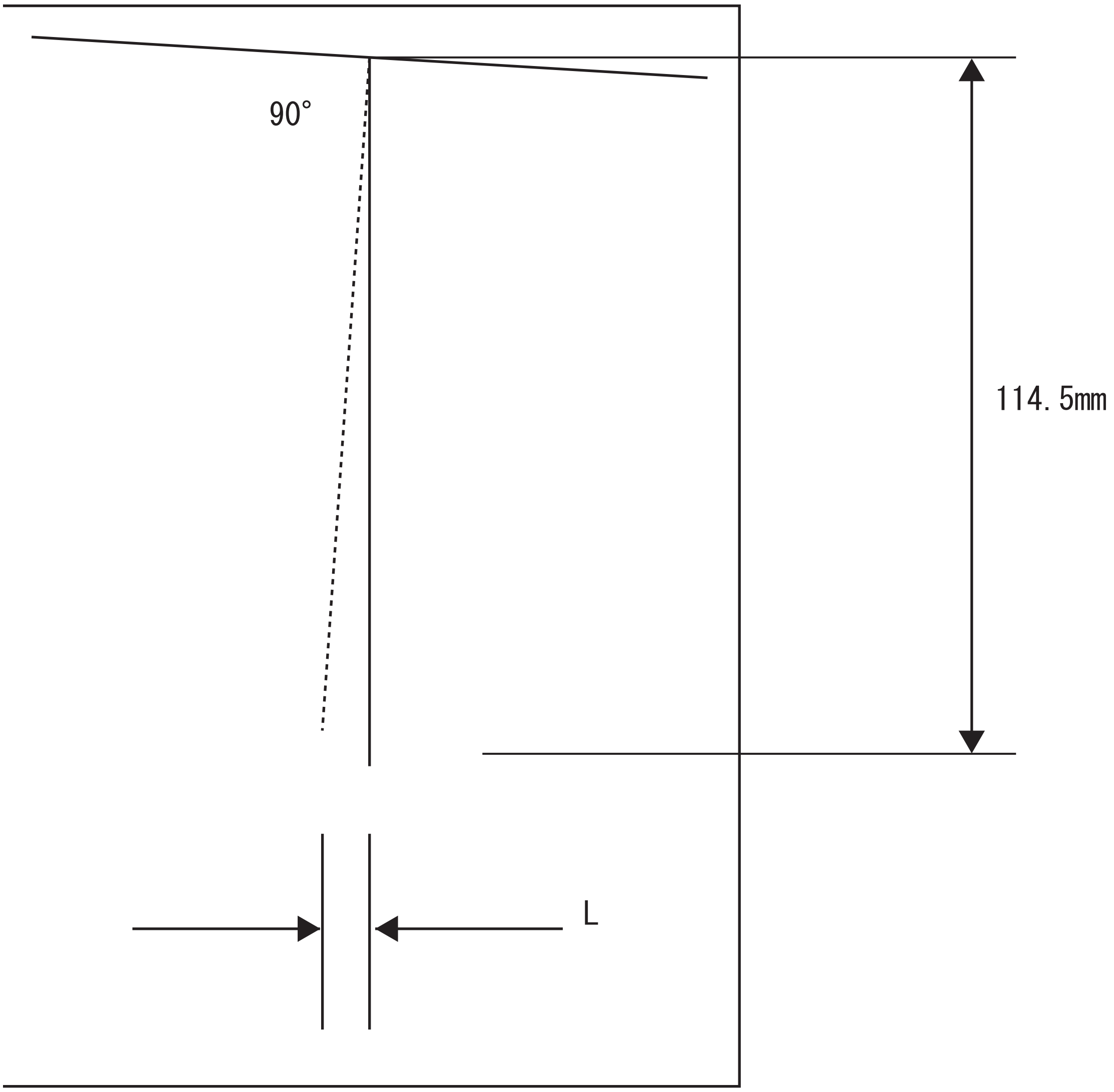
JG54A0AA

3.7.19 Perpendicularity

Measurement of the perpendicularity for suppressing inclines of ROS and OPC

Check the perpendicular line to the horizontal line to measure the horizontal distance at the point 114.5 mm away vertically from center of top horizontal line.

Reference: less than +/-0.8 mm



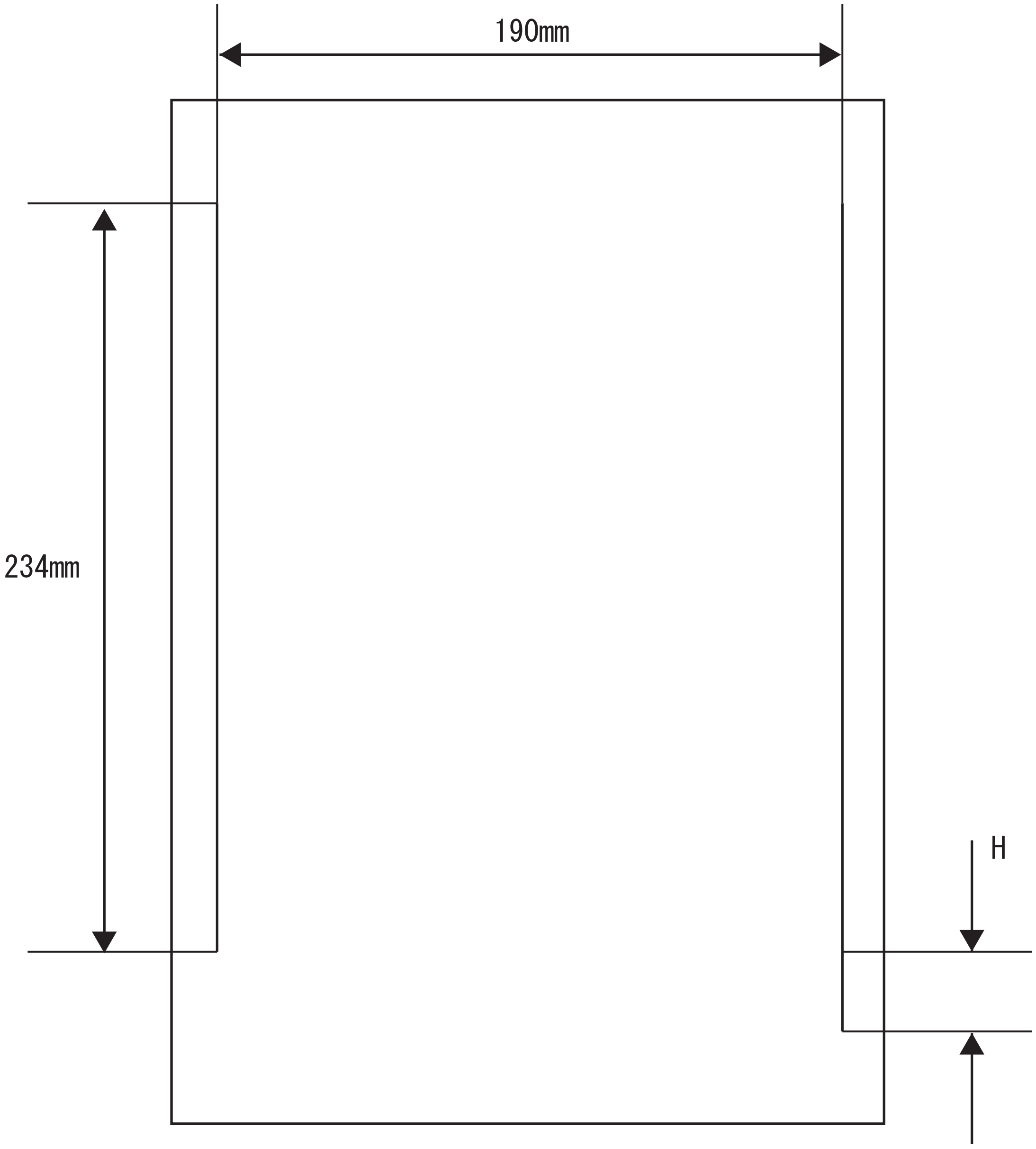
JG54A3AA

3.7.20 Parallelism

The parallelism is difference of feeding speed between left and right sides of the paper.

Measure the difference of length between two 234 mm long vertical lines 190 mm away each other.

Reference: less than +/-1.2 mm



JG54A4AA

3.7.21 Preventive maintenance

When visiting the customer, perform the maintenance work other than the original purpose to avoid any trouble that may arise.

Procedure for preventive maintenance

1) Check how the customer is using the machine.
2) Write down the cumulative print count.

NOTE **Use the cumulative print count as a guide of replacing periodic replacement parts.**
Replace the periodic replacement parts as required.

3) Print several piece of paper to check no problem.
4) Remove foreign articles on BTR ASSY, FUSER ASSY and paper transfer rolls, and clean stains with a brush and dry waste cloth.

NOTE **When stains is heavy, clean with dampened cloth, and then clean with dry cloth.**
Be careful not to damage the parts to be cleaned.

5) Cleaning the fan exhaust
   Remove COVER REAR, and clean the dust on MAIN FAN with a brush.
   Remove COVER FRONT, and clean the dust on FAN SUB.

NOTE **The clogged exhaust and fan cause a temperature rise inside and failures.**

6)Print several piece of paper again to check no problem.

4. Connector [P (plug) / J (jack)]

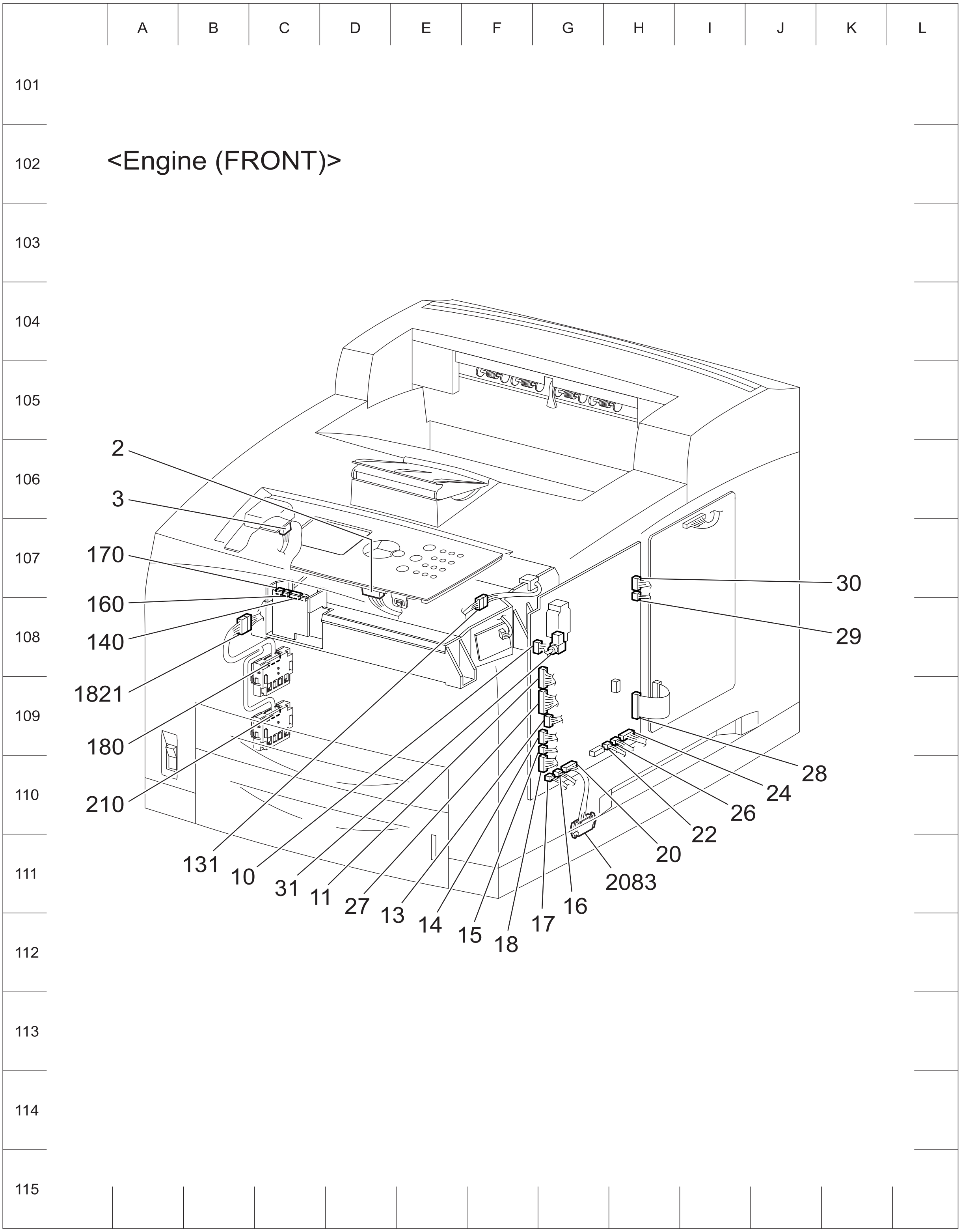
4.1 List of P/J

P/J	Coordinates	Remarks
2	A-106	Connects OPERATION PANEL and HARNESS ASSY PANEL
3	A-106	Connects OPERATION PANEL (PWBA USB) and HARNESS ASSY PANEL
10	B-111	Connects HARNESS ASSY LVPS and HVPS/MCU
11	D-111	Connects HARNESS ASSY LVPS and HVPS/MCU
13	E-111	Connects HARNESS ASSY ROS and HVPS/MCU
14	E-112	Connects HARNESS ASSY ROS and HVPS/MCU
15	F-112	Connects HARNESS ASSY CRUM and HVPS/MCU
16	G-111	Connects HARNESS ASSY ROS and HVPS/MCU
17	G-111	Connects HARNESS ASSY ROS and HVPS/MCU
18	F-112	Connects HARNESS ASSY LVPS and HVPS/MCU
20	H-111	Connects HARNESS ASSY FDR2 and HVPS/MCU
22	I-110	Connects HARNESS ASSY TONER2 and HVPS/MCU
24	J-110	Connects HARNESS ASSY CHUTE and HVPS/MCU
26	I-110	Connects HARNESS ASSY LOW PAPER SNR and HVPS/MCU
27	D-111	Connects HARNESS ASSY LVPS and HVPS/MCU
28	K-110	Connects FFC ASSY ESS and HVPS/MCU
29	K-108	Connects HARNESS ASSY EXIT SNR1 and HVPS/MCU
30	K-107	Connects HARNESS ASSY OCT1 and HVPS/MCU
31	C-111	Connects GUIDE ASSY CRU and HVPS/MCU
40	X-121	Connects HARNESS ASSY LVPS and LVPS
41	X-122	Connects HARNESS ASSY LVPS and LVPS
42	W-122	Connects HARNESS ASSY LVPS and LVPS
43 (47/42ppm)	X-122	Connects MAIN MOTOR and LVPS
43 (52ppm)	X-122	Connects HARNESS ASSY MAIN MOTOR and LVPS
44	X-123	Connects INTERLOCK SW REAR and LVPS
45	X-123	Connects INTERLOCK SW 24V and LVPS
46	X-120	Connects HARNESS ASSY FUSER and LVPS
47	U-126	Connects HARNESS ASSY FUSER and LVPS
48	U-125	Connects HARNESS ASSY 100V and LVPS
101	V-120	Connects LVPS and PWBA EXIT MOTOR
102	U-120	Connects HARNESS ASSY LVPS and PWBA EXIT MOTOR
103	S-119	Connects MOTOR ASSY EXIT and PWBA EXIT MOTOR
131	B-111	Connects ROS ASSY and HARNESS ASSY ROS
140	A-108	Connects ROS ASSY and HARNESS ASSY ROS
141	R-119	Connects HARNESS ASSY ROS and INTERLOCK SW 5V
150	M-121	Connects EP CARTRIDGE and HARNESS ASSY CRUM
160	A-108	Connects ROS ASSY and HARNESS ASSY ROS
170	A-107	Connects ROS ASSY and HARNESS ASSY ROS

List of P/J

P/J	Coordinates	Remarks
180	A-109	Connects SIZE1 Tray and HARNESS ASSY SIZE SW
210	A-110	Connects SIZE2 Tray and HARNESS ASSY SIZE SW
220	R-127	Connects SENSOR TONER and HARNESS ASSY TONER1
221	M-124	Connects HARNESS ASSY TONER1 and HARNESS ASSY TONER2
240	M-122	Connects NO PAPER SENSOR and HARNESS ASSY TRAY1
241	O-126	Connects SENSOR REGI and HARNESS ASSY TRAY1
242	Q-126	Connects CLUTCH ASSY PH and HARNESS ASSY CHUTE
243	P-126	Connects CLUTCH REGI and HARNESS ASSY CHUTE
244	M-124	Connects FAN MAIN and HARNESS ASSY CHUTE
245	M-125	Connects HARNESS ASSY TRAY1 and HARNESS ASSY CHUTE
246	M-123	Connects NO PAPER SENSOR and HARNESS ASSY TRAY2
247	Q-126	Connects CLUTCH ASSY PH and HARNESS ASSY TRAY2
248	M-126	Connects HARNESS ASSY TRAY2 and HARNESS ASSY CHUTE
260	N-126	Connects PAPER LOW SENSOR and HARNESS ASSY LOW PAPER SNR
270	T-119	Connects FAN SUB and HARNESS ASSY LVPS
271 (47/42ppm)	U-120	Connects HARNESS ASSY LVPS and MAIN MOTOR
271 (52ppm)	U-120	Connects HARNESS ASSY LVPS and HARNESS ASSY MAIN MOTOR
290	M-120	Connects SENSOR FULL STACK and HARNESS ASSY EXIT SNR1
291	M-120	Connects SENSOR FACE UP OPEN and HARNESS ASSY EXIT SNR1
310	M-122	Connects EP CARTRIGE and GUIDE ASSY CRU
431 (52ppm)	T-126	Connects MAIN MOTOR and HARNESS ASSY MAIN MOTOR
480	W-125	Connects HARNESS ASSY 100V and POWER SWITCH
1821	A-109	Connects GUIDE TRAY L ASSY (HARNESS ASSY SIZE SW) and HARNESS ASSY LVPS
2083	H-111	Connects HARNESS ASSY FDR2 (Engine) and HARNESS ASSY FDR2 (Feeder)
2750	S-126	Connects HARNESS ASSY LVPS and HARNESS ASSY DUP
3070	M-121	Connects HARNESS ASSY OCT1 and HARNESS ASSY OCT2
4647	T-126	Connects HARNESS ASSY FUSER and FUSER ASSY

4.2 P/J layout diagram


A
B
C
D
E
F
G
H
I
J
K
L
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
<Engine (FRONT)>
2
3
170
160
140
1821
180
210
131
10
31
11
27
13
14
15
18
17
16
2083
20
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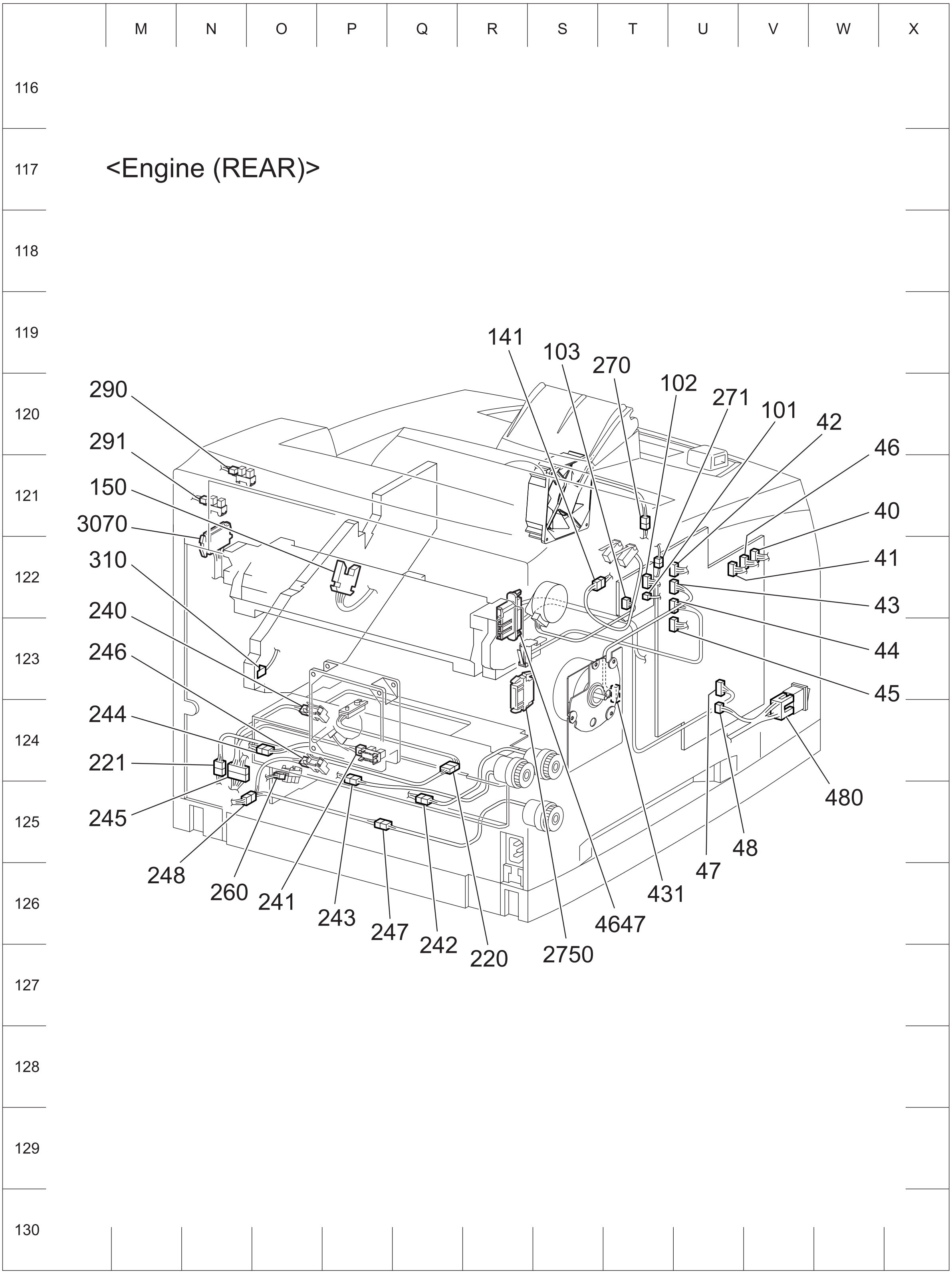
P/J layout diagram

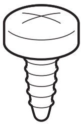
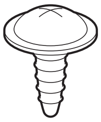
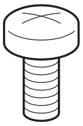
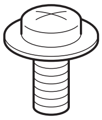
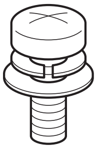
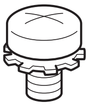
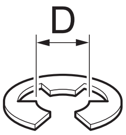

M
N
O
P
Q
R
S
T
U
V
W
X
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
<Engine (REAR)>
141
103
270
102
271
101
42
46
40
41
43
44
45
480
48
47
431
4647
2750
220
242
247
243
241
260
248
245
221
244
246
240
310
3070
150
291
290

J34102OA

5. Parts List

5.0.1 Caution for use of parts list

- The figures indicating the illustrations are the item No. in the list and present correspondence between the illustrations and parts.
- The notation of PL "X.Y.Z" is composed of the plate (PL), item "X.Y", and parts "Z".
- The alphabet characters in the illustrations represent screws and clips as follows:

Type	Shape	PL No.	Size	PARTS No.
Screw for plastic Silver, tapping		S1	M3X6mm	153W27678
		S2	M3X8mm	153W27878
		S3	M3X30mm	826E11030
		S4	M3X29mm	826E29000
		S5	M3X22mm	826E13551
Screw for plastic Silver, with flange, tapping		S6	M3X8mm	826E13590
Screw for metal sheet Silver		S7	M3X6mm	826E12480
		S8	M3X6mm	114W27678
		S9	M3X6mm	826E12480
		S10	M3X10mm	826E22420
Screw for metal sheet Silver, with flange		S11	M3X8mm	826E12490
		S12	M3X8mm	826E22380
Screw for metal sheet Silver, with lock washer		S13	M3X8mm	112W27898
		S14	M3X10mm	112W28098
Screw for metal sheet Silver, with an external tooth washer		S15	M4X5mm	826E25760
Ring-E		E1	D3	354W21278
		E2	D4	354W24278

- "t" in the illustrations are attached to items indicating assembly parts in the illustrations.
- Encircled alphabetical figures in the illustrations indicate interrupted leader lines. Same characters in the illustrations represent lines to be connected.
- The mark "(with 2-5)" attached to assembly parts on the illustrations and lists represents that the items "2, 3, 4, and 5" of that plate are contained and the mark "(with 2-5, PL6.1.1) represent that the item "2, 3, 4, and 5" of that plate and the item "1" of the plate "6.1" are contained.
- The mark "[Same PLX.Y.Z]" attached to parts in the illustrations and lists resents that the parts is the same as the parts of the item "Z" of the plate "X.Y".
- The mark "H" attached to the item in the list represents "recommended spare parts" which can be usually supplied. (Supply of other parts shall be examined separately.)
- The mark "[" attached to parts in the list represents "Note" or "Reference" about that parts is contained in the same page.
- "HIGH ASSY" in the list represent the high level assembly parts containing that parts.

NOTE

For spare parts, refer to the Spare parts list which is issued separately.

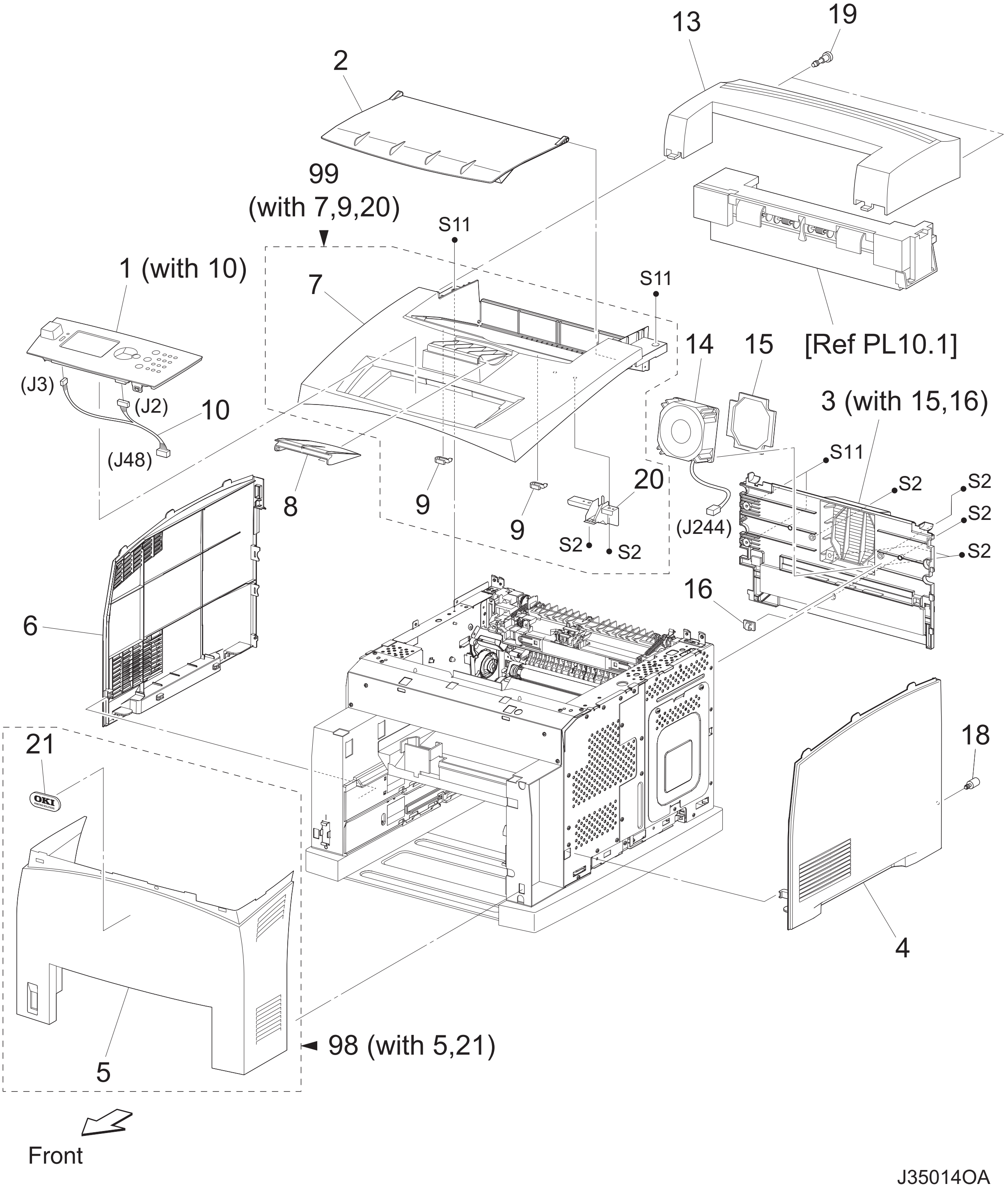
NOTE

For the connector (P/J), parts such as harness, wire, etc. in the list, refer to “Chapter 9, Wiring Diagrams and Signal Information”

NOTE

It should be noted that configuration of parts may be different or some parts are not used depending on specifications of OEM.

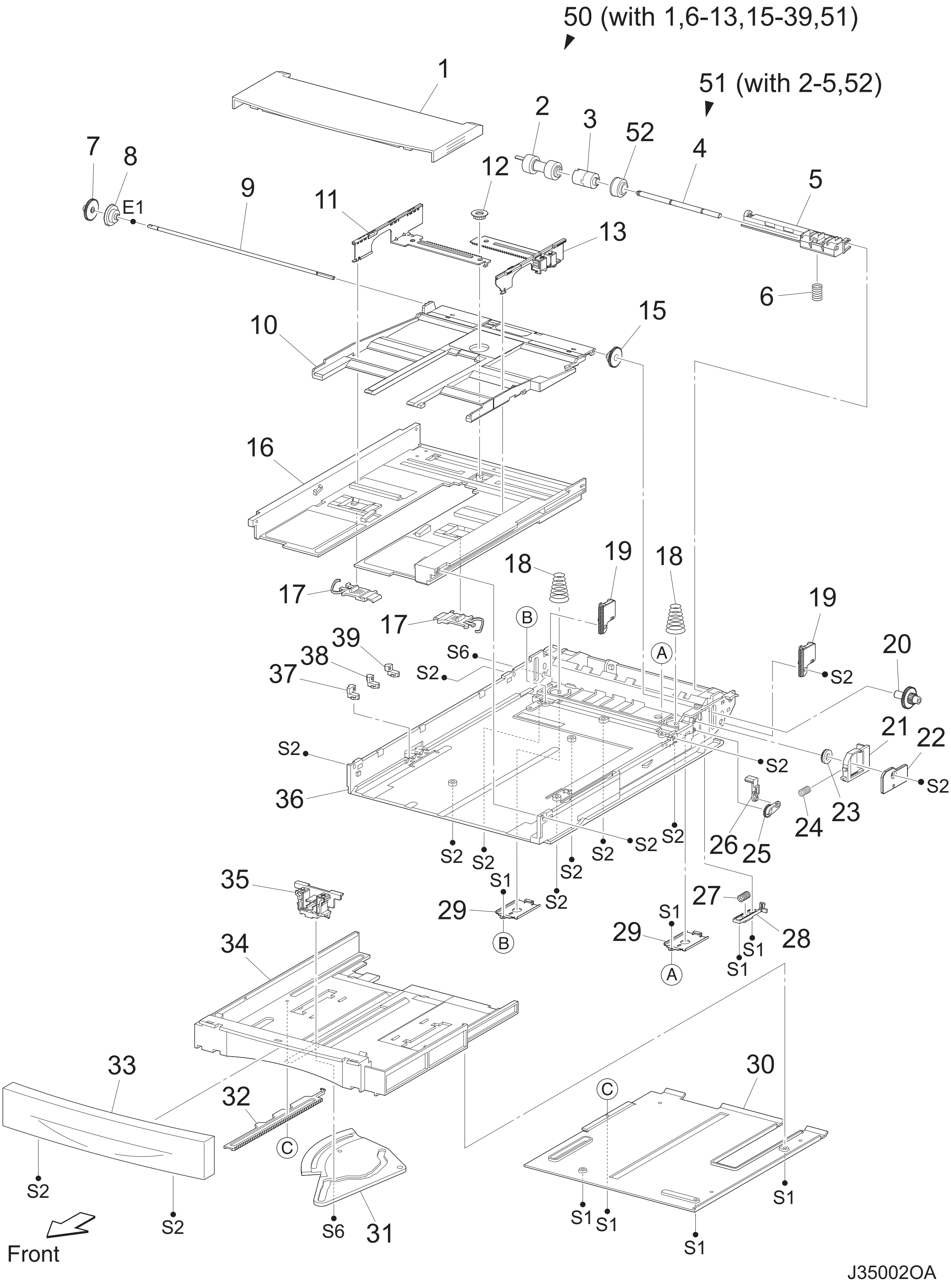
5.0.2 PL1.1 Cover [Illustration]


13
19
2
99
(with 7,9,20)
S11
1 (with 10)
7
S11
14
15
[Ref PL10.1]
(J3)
(J2)
10
3 (with 15,16)
(J48)
S11
S2
S2
S2
S2
20
8
9
9
S2
S2
(J244)
16
6
18
21
4
98 (with 5,21)
5
Front
J35014OA

5.0.3 PL1.1 Cover [List]

Item	Parts name
1	OPERATION PANEL (with 10)
2	COVER OPEN
3	COVER REAR (with 15,16)
4	COVER RIGHT
5	COVER FRONT
6	COVER LEFT
7	COVER TOP
8	COVER STOPPER
9	STOPPER OPEN
10	HARNESS ASSY PANEL (J48-J2,J3)
11	- -
12	- -
13	COVER EXIT 500
14	FAN MAIN 80 (J244)
15	SEAL REAR FAN
16	CLAMP
17	- -
18	SCREW KNURLING
19	THUMB SCREW EXIT
20	BRACKET INTERLOCK SW
21	BADGE LOGO OKI
98	KIT FRONT COVER ASSY (with 5,21)
99	KIT TOP COVER (with 7,9,20)

5.0.4 PL2.1 150 Paper Cassette [Illustration]


50 (with 1,6-13,15-39,51)
51 (with 2-5,52)
1
2
3
52
4
5
6
7
8
E1
9
10
11
12
13
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
A
B
C
S1
S2
S6
Front
J35002OA

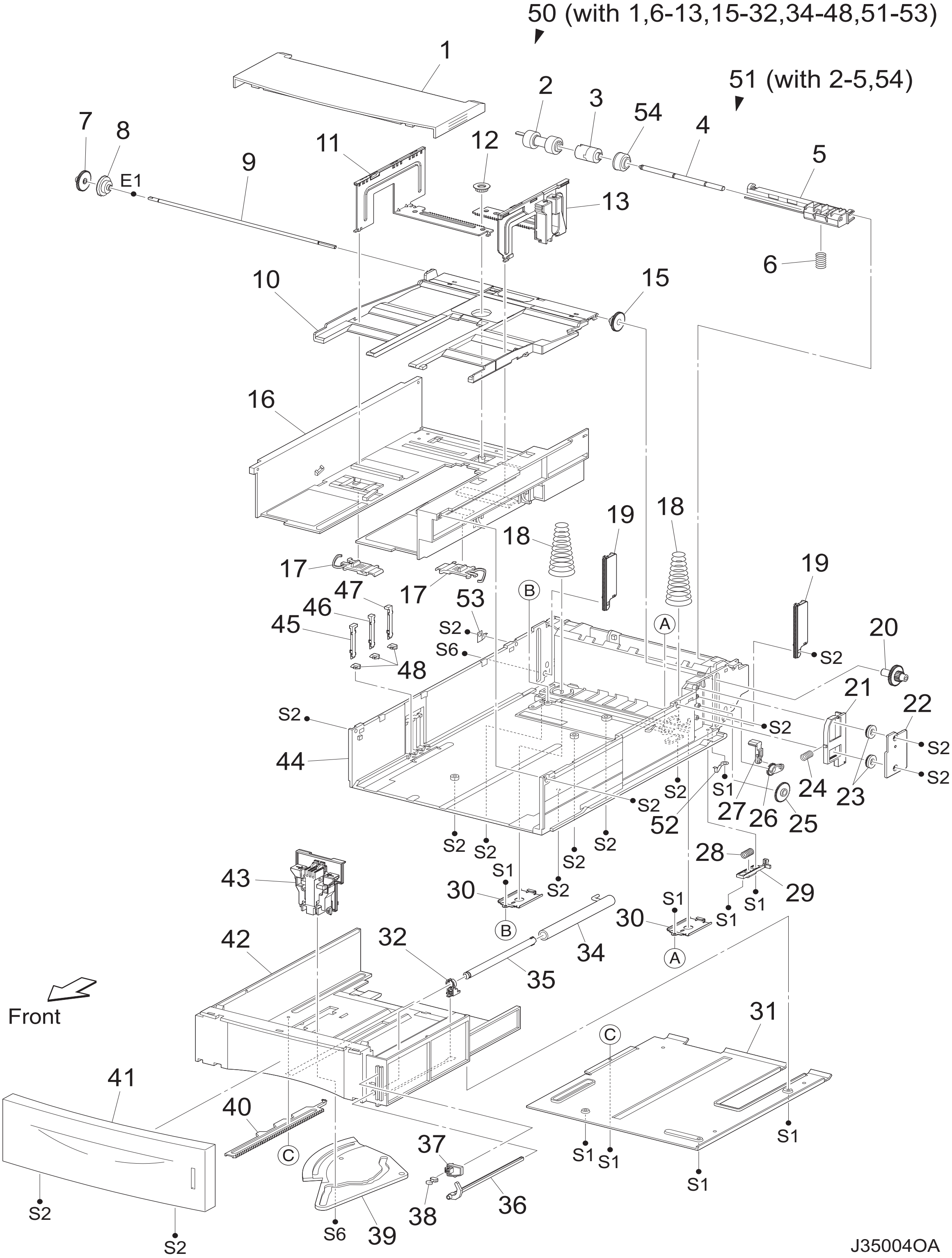
PL2.1 150 Paper Cassette [List]

Item	Parts name
1	COVER CST
2	ROLL ASSY RETARD *1
3	FRICTION CLUTCH
4	SHAFT RETARD
5	HOLDER RETARD
6	SPRING RETARD
7	GEAR PB L
8	GEAR BTM DMP ONEWAY
9	SHAFT PB
10	PLATE ASSY BTM
11	GUIDE ASSY SD L150
12	GEAR PINION
13	GUIDE ASSY SD R150
14	- -
15	GEAR BTM LOCK ONEWAY
16	HOUSING TOP 150
17	LOCK EXTENSION
18	SPRING BTM UP 150
19	PLATE GEAR LOCK 150
20	GEAR PB R
21	RACK BTM LOCK 150
22	COVER BTM UP
23	GEAR BTM LOCK PINION
24	SPRING BTM LOCK
25	GEAR LEVER LOCK
26	LEVER BTM LOCK
27	SPRING STOPPER GEAR
28	STOPPER GEAR
29	PLATE SUPPORT BASE
30	COVER EXTENSION
31	GEAR SECTOR
32	RACK SIZE
33	HANDLE EXTENSION 150
34	HOUSING EXTENSION 150
35	GUIDE ASSY END 150
36	HOUSING BASE 150
37	LINK SW SIZE1-150
38	LINK SW SIZE2-150
39	LINK SW SIZE3-150
40	- -
41	- -
42	- -

50	150 PAPER CASSETTE (with 1,6-13,15-39,51)
51	HOLDER ASSY RETARD (with 2-5,52)
52	COLLAR

*1: Periodical Replacement parts (per 200k print)
3 sets [1] of PL2.1.2, PL5.1.11, 44

PL4.1 550 Paper Cassette [Illustration]


50 (with 1,6-13,15-32,34-48,51-53)
51 (with 2-5,54)
1
2
3
54
4
5
7
8
E1
9
11
12
13
6
10
15
16
19
18
18
19
17
47
17
53
46
45
48
B
A
S2
S6
20
21
22
S2
S2
S2
S2
44
24
23
S2
S1
27
26
25
S2
52
S2
S2
S2
S2
S2
S1
30
S2
28
S1
29
S1
S1
30
B
A
43
42
32
34
35
Front
31
C
41
40
C
37
36
38
39
S1
S1
S1
S1
S2
S2
S6
J35004OA

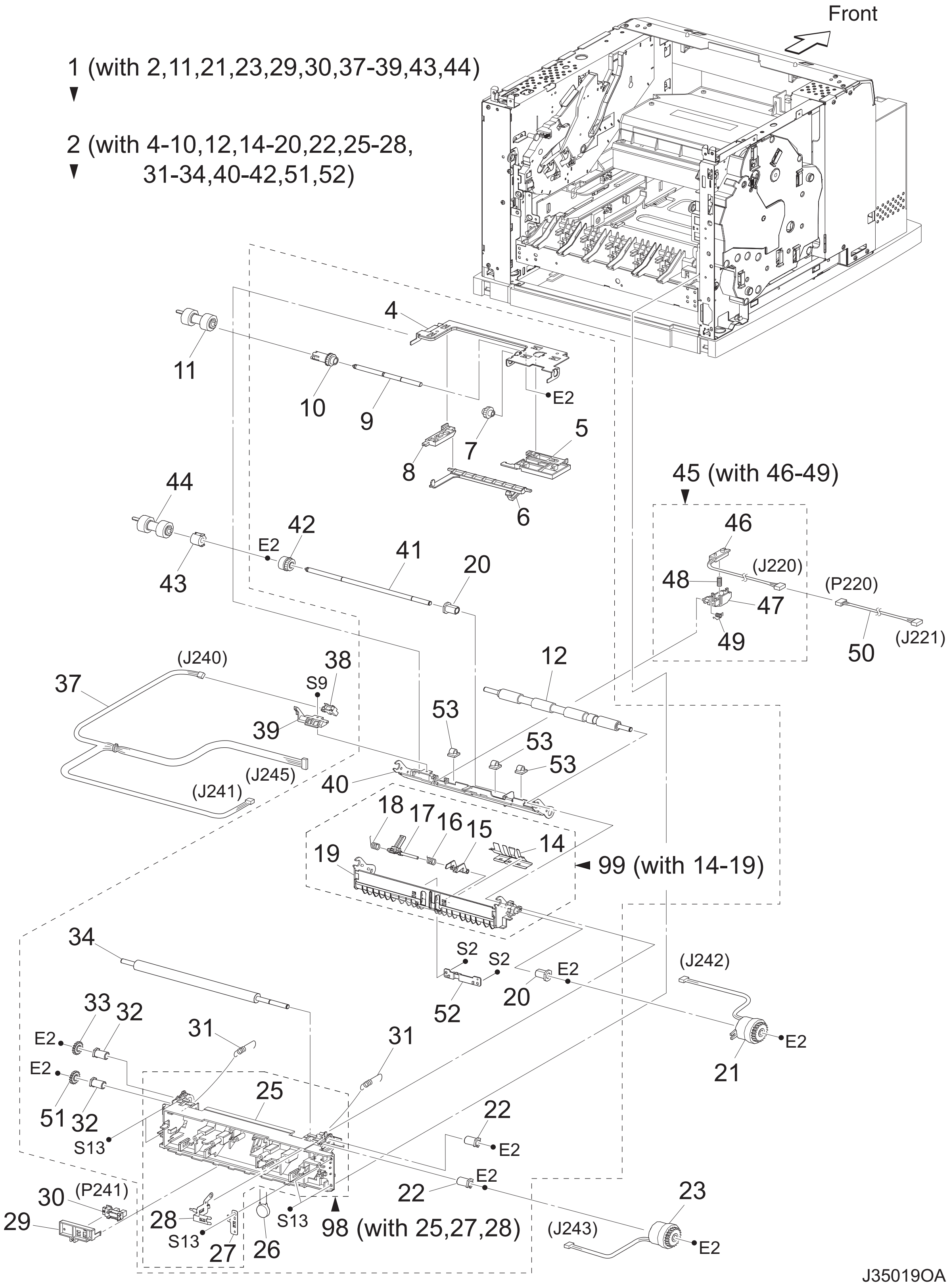
5.0.5 PL4.1 550 Paper Cassette [List]

Item	Parts name
1	COVER CST
2	ROLL ASSY RETARD *1
3	FRICTION CLUTCH
4	SHAFT RETARD
5	HOLDER RETARD
6	SPRING RETARD
7	GEAR PB L
8	GEAR BTM DMP ONEWAY
9	SHAFT PB
10	PLATE ASSY BTM
11	GUIDE ASSY SD L550
12	GEAR PINION
13	GUIDE ASSY SD R550
14	- -
15	GEAR BTM LOCK ONEWAY
16	HOUSING TOP 550
17	LOCK EXTENSION
18	SPRING BTM UP 550
19	PLATE GEAR LOCK 550
20	GEAR PB R
21	RACK BTM LOCK 550
22	COVER BTM UP 550
23	GEAR BTM LOCK PINION
24	SPRING BTM LOCK
25	GEAR BTM LOCK
26	GEAR LEVER LOCK
27	LEVER BTM LOCK
28	SPRING STOPPER GEAR
29	STOPPER GEAR
30	PLATE SUPPORT
31	COVER EXTENSION
32	SUPPORT GUIDE IND
33	- -
34	GUIDE INDICATOR 1
35	GUIDE INDICATOR 2
36	GUIDE INDICATOR 3
37	LOW INDICATOR
38	LOW IND FRONT
39	GEAR SECTOR
40	RACK SIZE
41	HANDLE EXTENSION 550
42	HOUSING EXTENSION 550
43	GUIDE ASSY END 550
44	HOUSING BASE 550
45	LINK SW SIZE1-550
46	LINK SW SIZE2-550
47	LINK SW SIZE3-550
48	LINK SW SIZE LOW
49	- -
50	550 PAPER CASSETTE (with 1,6-13,15-32,34-48,51-53)

51	HOLDER ASSY RETARD (with 2-5,54)
52	STOPPER BASE R
53	STOPPER BASE L
54	COLLAR

*1: Periodical Replacement parts (per 200k print)
3sets [1] of PL4.1.2, PL7.1.19, 29

5.0.6 PL5.1 150 Paper Feeder [Illustration]


Front
1 (with 2,11,21,23,29,30,37-39,43,44)
2 (with 4-10,12,14-20,22,25-28,
31-34,40-42,51,52)
4
11
10
9
E2
5
7
8
6
45 (with 46-49)
44
42
E2
41
20
43
46
(J220)
48
(P220)
47
49
50
(J221)
(J240)
38
S9
37
12
39
53
53
53
(J245)
(J241)
40
18
17
16
15
14
19
99 (with 14-19)
34
S2
S2
E2
(J242)
20
52
33
32
E2
31
31
E2
E2
25
21
51
32
S13
22
E2
30
(P241)
E2
22
23
29
28
S13
98 (with 25,27,28)
(J243)
E2
S13
27
26
J35019OA

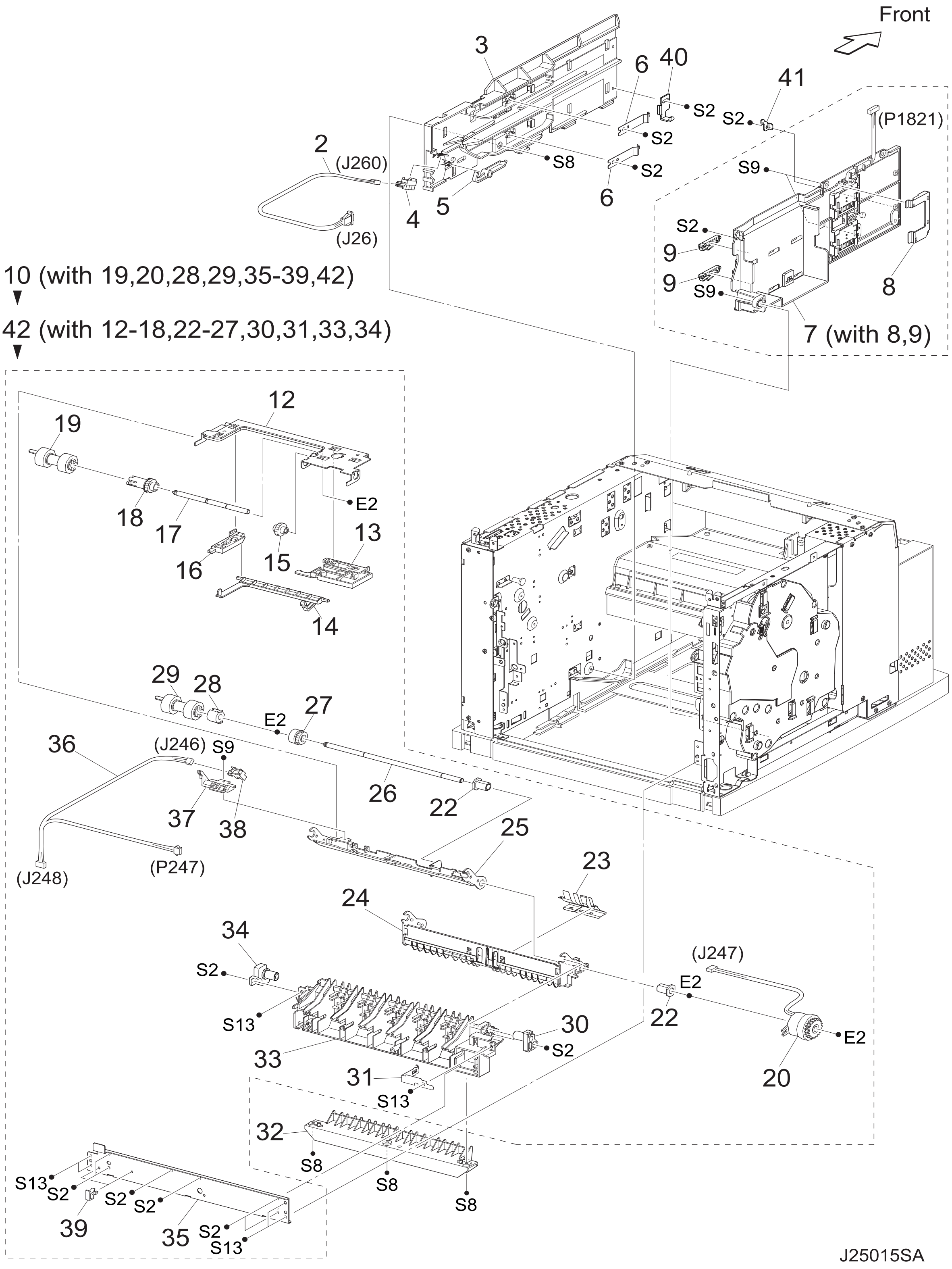
5.0.7 PL5.1 150 Paper Feeder [List]

Item	Parts name
1	150 FEEDER ASSY (with 2,11,21,23,29,30,37-39,43,44)
2	FDR1 AS SUB 150 A4 (with 4-10,12,14-20,22,25-28,31-34,40-42,51,52)
3	- -
4	SUPPORT NUDGER
5	HOLDER LEFT
6	ACTUATOR NO PAPER
7	GEAR IDLER NUDGER
8	HOLDER RIGHT
9	SHAFT NUDGER
10	GEAR NUDGER
11	ROLL ASSY NUDGER *1
12	ROLL REGI RUBBER 45
13	- -
14	COVER ACTUATOR-A4
15	ACTUATOR A
16	SPRING REGI SNR B
17	ACTUATOR B
18	SPRING REGI SNR A
19	CHUTE BTM ASSY
20	BEARING NUDGER
21	CLUTCH ASSY PH (J242)
22	BEARING REGI LEFT
23	CLUTCH REGI (J243)
24	- -
25	CHUTE REGI 45
26	VARISTOR
27	EARTH PLATE BASE
28	EARTH PLATE MID
29	COVER SENSOR
30	SENSOR REGI (P241)
31	SPRING REGI
32	BEARING REGI RIGHT
33	GEAR REGI RUBBER BLUCK
34	ROLL REGI METAL
35	- -
36	- -
37	HARNESS ASSY TRAY1 (J245-J240,J241)
38	NO PAPER SENSOR (P240)
39	HOLDER NO PAPER SENSOR
40	CHUTE TOP ASSY
41	SHAFT FEED
42	CLUTCH ONEWAY NUDGER
43	CLUTCH ONEWAY FEED
44	ROLL ASSY FEED *1
45	SENSOR ASSY TONER (with 46-49)
46	SENSOR TONER (J220)
47	HOLDER-D
48	SPRING TONER
49	SPRING TONER BOX
50	HARNESS ASSY TONER 1 (P220-J221)

51	GEAR REGI METAL WHITE
52	PLATE ACTUATOR A4
53	CLAMP
98	KIT CHUTE REGI (with 25,27,28)
99	KIT CHUTE BTM (with 14-19)

*1: Periodical Replacement parts (per 200k print)
3sets [1] of PL5.1.11, 44, PL2.1.2

5.0.8 PL7.1 550 Paper Feeder [Illustration]


Front
3
6
40
41
S2
S2
S2
S2
(P1821)
2
(J260)
S8
S2
S9
4
5
6
(J26)
S2
9
9
S9
8
10 (with 19,20,28,29,35-39,42)
42 (with 12-18,22-27,30,31,33,34)
7 (with 8,9)
12
19
E2
18
17
13
15
16
14
29
28
27
E2
36
(J246)
S9
26
22
37
38
25
(J248)
(P247)
23
24
34
(J247)
S2
E2
S13
22
30
S2
E2
33
31
S13
20
32
S8
S8
S8
S13
S2
S2
S2
39
35
S2
S13
J25015SA

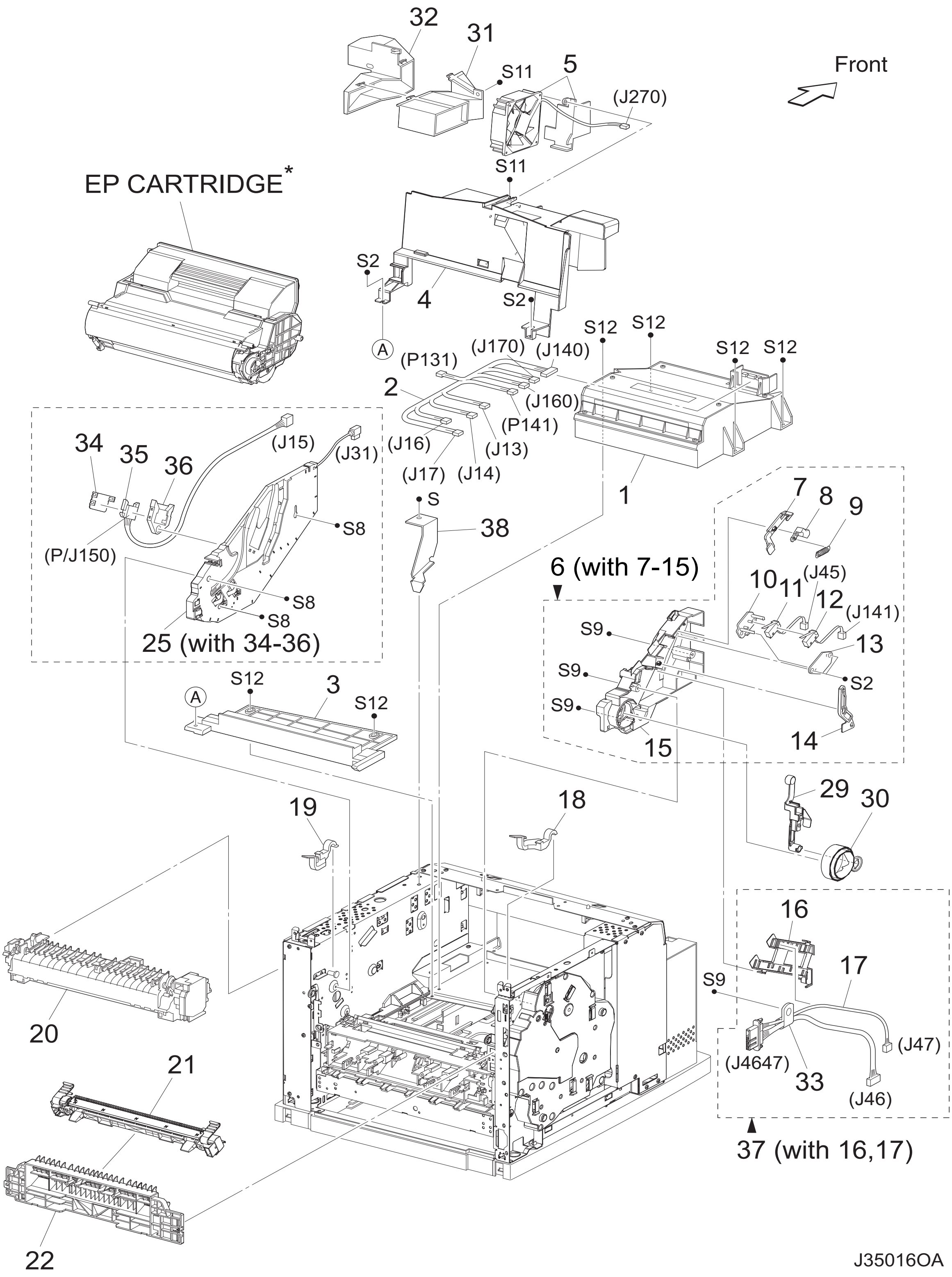
5.0.9 PL7.1 550 Paper Feeder [List]

Item	Parts name
1	- -
2	HARNESS ASSY LOW1 (J26-J260)
3	GUIDE TRAY RIGHT
4	PAPER LOW SENSOR (P260)
5	ACTUATOR LOW PAPER
6	PLATE CST LOCK
7	GUIDE TRAY LEFT (with 8,9)
8	COVER HARNESS SIZE
9	LOCK CST L
10	550 FEEDER ASSY (with 19,20,28,29,35-39,42)
11	- -
12	SUPPORT NUDGER
13	HOLDER LEFT
14	ACTUATOR NO PAPER
15	GEAR IDLER NUDGER
16	HOLDER RIGHT
17	SHAFT NUDGER
18	GEAR NUDGER
19	ROLL ASSY NUDGER *1
20	CLUTCH ASSY PH (J247)
21	- -
22	BEARING NUDGER
23	COVER ACTUATOR
24	CHUTE BTM ASSY
25	CHUTE TOP ASSY
26	SHAFT FEED
27	CLUTCH ONEWAY NUDGER
28	CLUTCH ONEWAY FEED
29	ROLL ASSY FEED *1
30	HOLDER PIVOT LEFT
31	SPRING EARTH
32	CHUTE 550 LOWER
33	CHUTE OUT
34	HOLDER PIVOT RIGHT
35	PLATE TIE
36	HARNESS ASSY TRAY2 (J248-J246,P247)
37	HOLDER NO PAPER SENSOR
38	NO PAPER SENSOR (P246)
39	CLAMP-10V0
40	STOPPER TRAY R

41	STOPPER TRAY L
42	FDR2 ASSY SUB 250 A4 (with 12-18,22-27,30,31,33,34)

*1: Periodical Replacement parts (per 200k print)
3sets [1] of PL7.1.19, 29, PL4.1.2

5.0.10 PL8.1 Xero [Illustration]


32
31
S11
5
(J270)
Front
S11
EP CARTRIDGE*
S2
4
S2
A
S12
S12
S12
S12
(J170)
(J140)
(P131)
2
(J160)
(P141)
(J16)
(J13)
(J17)
(J14)
1
34
35
36
(J15)
(J31)
S8
(P/J150)
S8
S8
25 (with 34-36)
S
38
6 (with 7-15)
7
8
9
10
11
(J45)
12
(J141)
13
S9
S9
S9
S2
14
15
S12
3
S12
A
19
18
29
30
16
17
S9
(J47)
(J4647)
33
(J46)
37 (with 16,17)
20
21
22
J35016OA

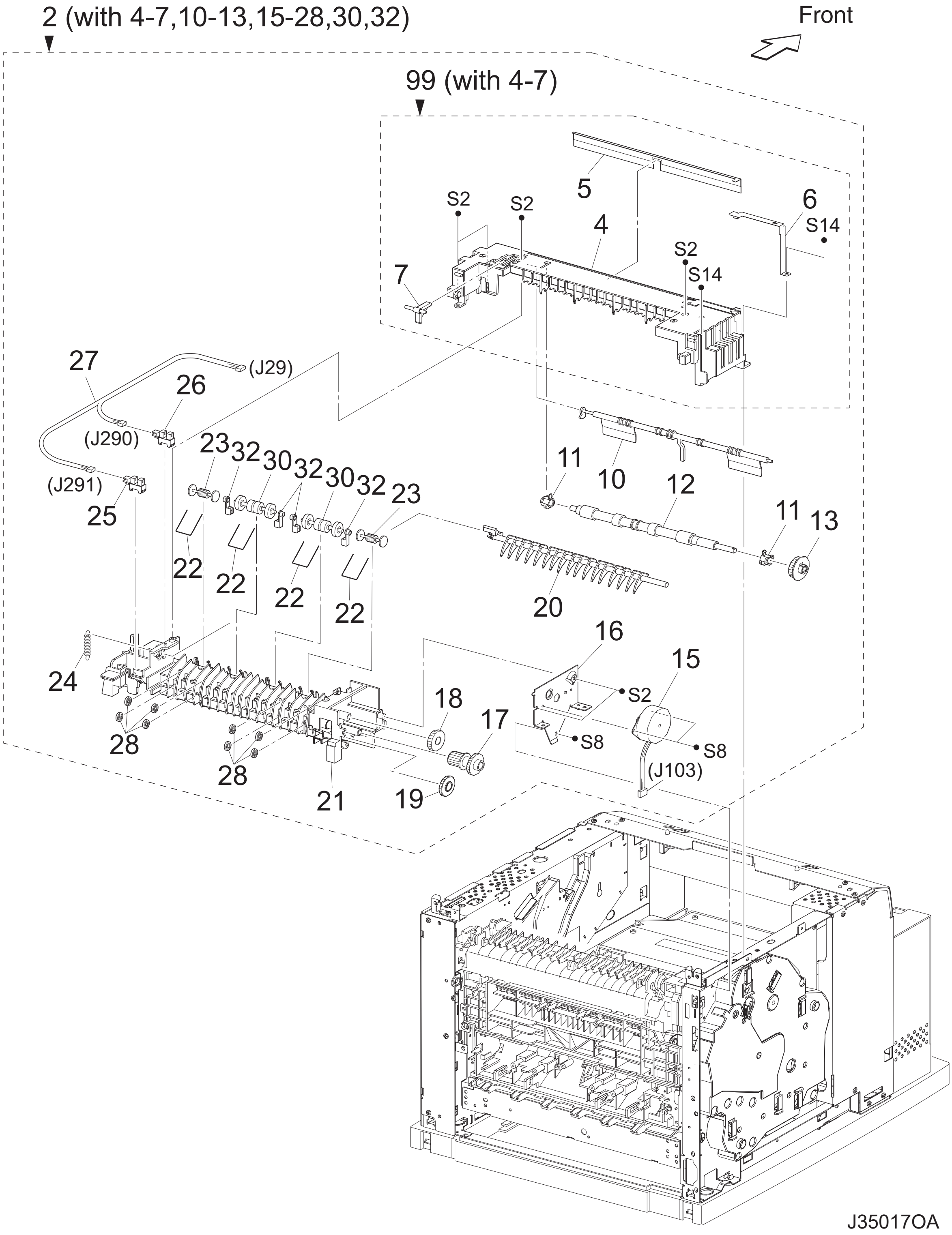
5.0.11 PL8.1 Xero [List]

Item	Parts name
1	ROS ASSY (J131,P140,P160,P170)
2	HARNESS ASSY ROS (J13,J14,J16,J17-P131,J140,P141,J160,J170)
3	SHIELD PLATE ROS
4	DUCT FRONT
5	FAN SUB (J270)
6	GUIDE ASSY CRU L (with 7-15)
7	GUIDE SL
8	SPACER SS
9	SPRING SL
10	HOLDER I/L SW1
11	HARNESS ASSY INTERLOCK1 (J45)
12	HARNESS ASSY INTERLOCK3 (J141)
13	HOLDER I/L SW2
14	LEVER GUIDE
15	GUIDE CRU LEFT
16	COVER GUIDE CRU
17	HARNESS ASSY FUSER (J4647-J46,J47)
18	LEVER FUSER LH
19	LEVER CRU FUSER RH
20	FUSER ASSY *1
21	HOUSING ASSY BTR *2
22	CHUTE TRANSFER
23	- -
24	- -
25	GUIDE ASSY CRU R (J31) (with 34-36)
26	- -
27	- -
28	- -
29	LEVER LINK
30	LINK GEAR 3
31	DUCT VACUUM L
32	DUCT VACUUM R
33	CLAMP
34	COVER CONN CRUM
35	HARNESS ASSY CRUM (J15-J150)
36	HOLDER CONN CRUM
37	COVER ASSY GUIDE (with 16,17)
38	BRACKET R

*1: Periodical Replacement parts (per 200k print)

*2: Periodical Replacement parts (per 200k print)

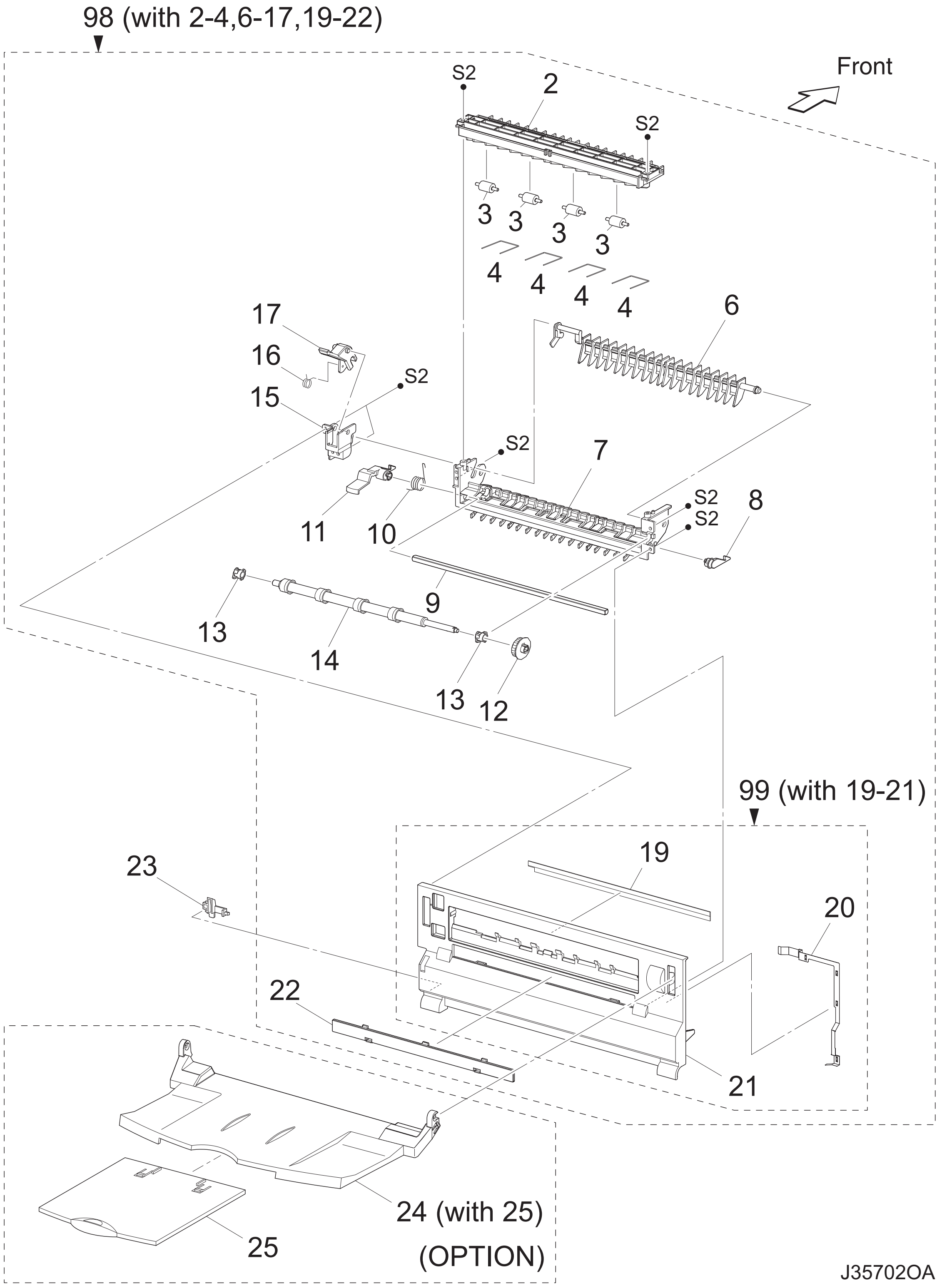
5.0.12 PL10.1 500 Paper Exit (1/2) [Illustration]


2 (with 4-7,10-13,15-28,30,32)
Front
99 (with 4-7)
5
6
S14
S2
S2
4
S2
S14
7
27
(J29)
26
(J290)
23
32
30
32
30
32
23
(J291)
25
11
10
12
11
13
22
22
22
22
20
16
15
24
S2
18
17
28
S8
S8
28
(J103)
21
19
J35017OA

5.0.13 PL10.1 500 Paper Exit (1/2) [List]

Item	Parts name
1	- -
2	500 EXIT ASSY (with 4-7,10-13,15-28,30,32)
3	- -
4	CHUTE UP EXIT
5	ELIMINATOR EXIT
6	EARTH PLATE EXIT
7	LINK GATE OCT
8	- -
9	- -
10	ACTUATOR FULL STACK
11	BEARING EXIT
12	ROLL EXIT
13	GEAR 21
14	- -
15	MOTOR ASSY EXIT (J103)
16	BRACKET MOTOR EXIT
17	GEAR 16/49
18	GEAR 25-2
19	GEAR 25-1
20	GATE OCT EXIT
21	CHUTE LOW EXIT
22	SPRING PINCH EXIT
23	ROLL PINCH EXIT
24	SPRING GATE OCT
25	SENSOR FACE UP OPEN (P291)
26	SENSOR FULL STACK (P290)
27	HARNESS ASSY EXIT SNR (J29-J290,J291)
28	ROLL EXIT 500
29	- -
30	ROLL PINCH EXIT OCT
31	- -
32	GUARD EXIT
99	KIT CHUTE UP 500 (with 4-7)

5.0.14 PL10.2 500 Paper Exit (2/2) & Face Up Tray (Option) [Illustration]

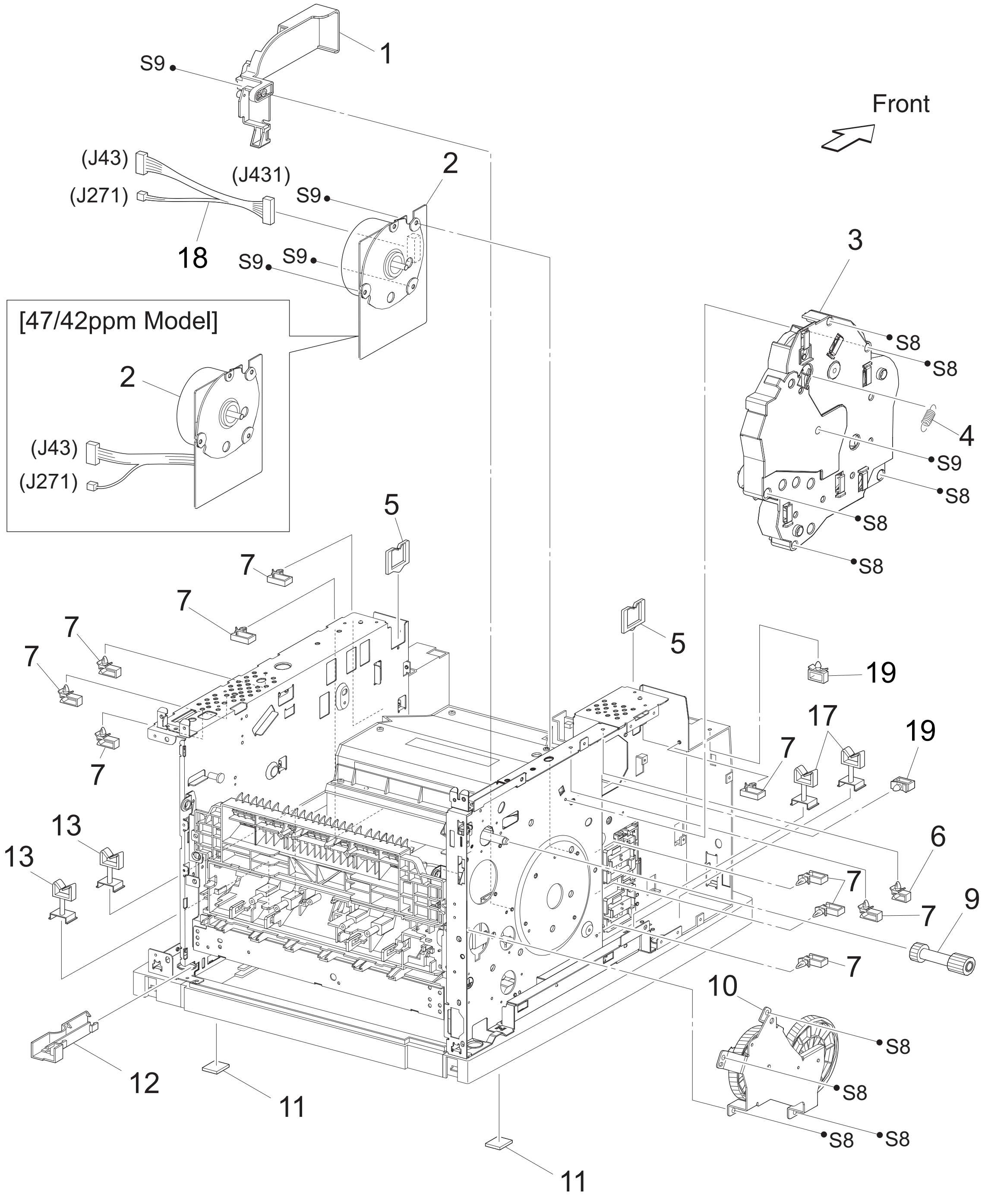

98 (with 2-4,6-17,19-22)
Front
S2
2
S2
3
3
3
3
4
4
4
4
6
17
16
S2
15
S2
7
S2
S2
8
11
10
9
13
14
13
12
99 (with 19-21)
23
19
20
22
21
24 (with 25)
(OPTION)
25
J35702OA

5.0.15 PL10.2 500 Paper Exit (2/2) & Face Up Tray (Option) [List]

Item	Parts name
1	- -
2	CHUTE UP FU
3	ROLL PINCH FU
4	SPRING PINCH FU
5	- -
6	GATE FU
7	CHUTE LOW FU
8	LEVER LATCH LEFT
9	PIPE LATCH FU
10	SPRING LATCH FU
11	LEVER LATCH RIGHT
12	GEAR 21
13	BEARING EXIT
14	ROLL FU
15	LEVER GATE HOLDER
16	SPRING LEVER GATE
17	LEVER GATE FU
18	- -
19	ELIMINATOR EXIT FU
20	EARTH PLATE FU
21	COVER REAR 500
22	COVER DUP
23	STOPPER FSR
*24	TRAY FU A4 ASSY (with 25)
*25	TRAY FU SUB A4
26	- -
27	- -
28	- -
98	COVER REAR 500 (with 2-4,6-17,19-22)
99	KIT COVER REAR 500H (with 19-21)

*NOTE: OKI model is standard.

5.0.16 PL11.1 Frame & Drive [Illustration]

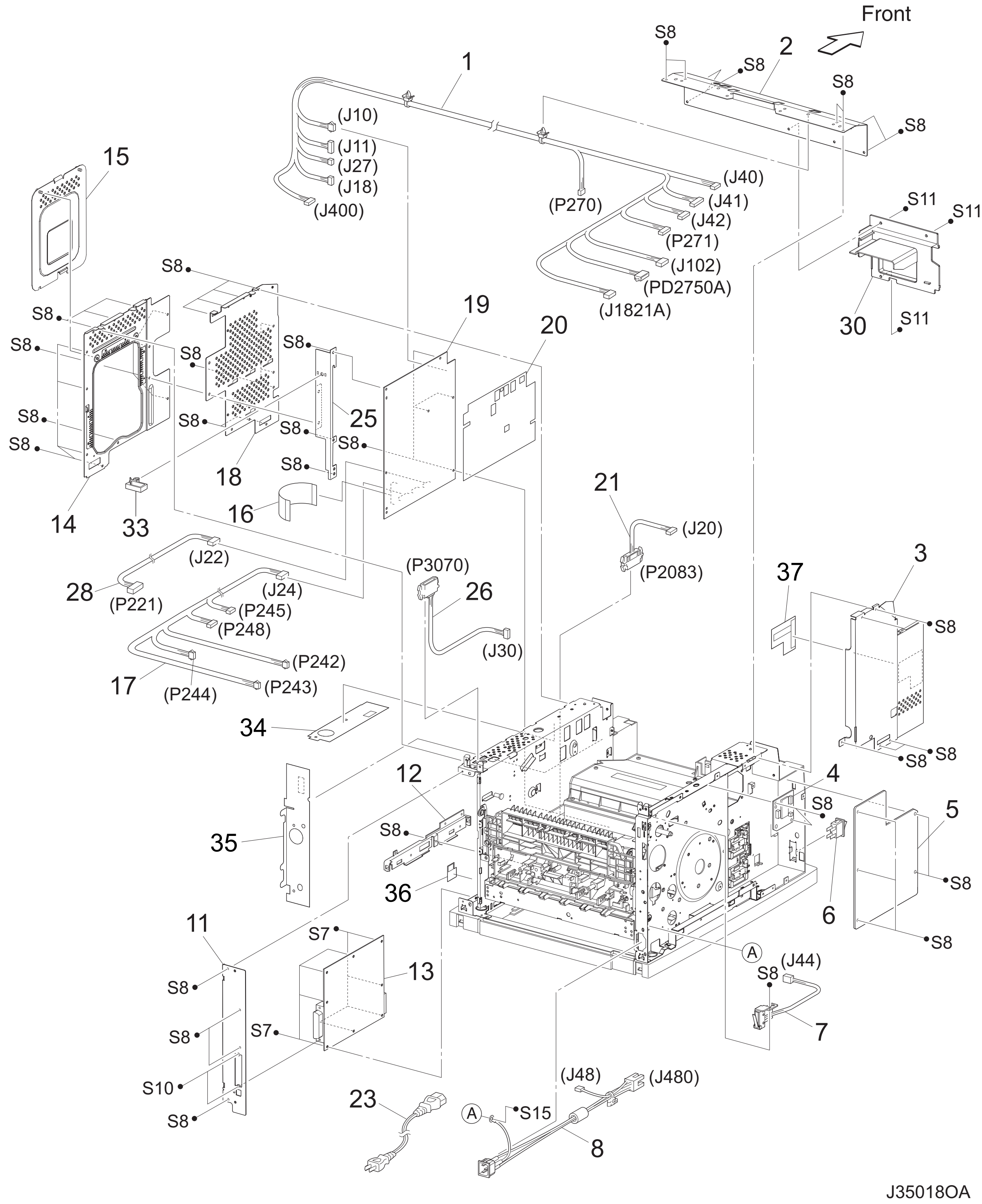

S9
1
Front
(J43)
(J431)
2
(J271)
S9
18
S9
S9
3
[47/42ppm Model]
2
S8
S8
4
(J43)
(J271)
S9
S8
5
S8
7
S8
7
5
7
19
7
17
19
7
7
13
6
13
7
9
7
7
10
S8
12
S8
11
S8
S8
11

J35020OA

5.0.17 PL11.1 Frame & Drive [List]

Item	Parts name
1	MOTOR COVER
2	MAIN MOTOR
3	GEAR ASSY HOUSING
4	SPRING RELEASE
5	CLAMP-EDGE
6	CLAMP-5V0
7	CLAMP-10V0
8	- -
9	GEAR 9
10	GEAR ASSY PLATE
11	FOOT
12	GUIDE HARNESS R
13	CLAMP-RWSH
14	- -
15	- -
16	- -
17	CLAMP
18	HARNESS ASSY MAIN MOTOR (J431-J43,J271) (52ppm Model Only)
19	CLAMP

5.0.18 PL12.1 Electrical [Illustration]


Front
S8
2
S8
S8
S8
1
(J10)
(J11)
(J27)
(J18)
(J400)
(P270)
(J40)
(J41)
(J42)
(P271)
(J102)
(PD2750A)
(J1821A)
S11
S11
S11
30
15
S8
S8
S8
S8
S8
S8
S8
S8
S8
S8
S8
19
20
25
18
16
14
33
21
(J20)
(P2083)
28
(J22)
(P221)
(J24)
(P245)
(P248)
(P242)
(P243)
(P244)
17
(P3070)
26
(J30)
37
3
S8
S8
S8
34
12
S8
35
36
4
S8
5
S8
6
S8
11
S7
S8
13
S8
S7
S10
S8
A
S8
(J44)
7
(J48)
(J480)
23
A
S15
8
J35018OA

5.0.19 PL12.1 Electrical [List]

Item	Parts name
1	HARNESS ASSY LVPS (J10,J11,J18,J27,J40,J41,J42,J102,P270,P271,J400,J1821A,PD2750A)
2	PLATE TIE FRONT
3	SHIELD PLATE LVPS
4	PWBA EXIT MOTOR
5	LVPS
6	POWER SWITCH
7	INTERLOCK S/W REAR (J44)
8	HARNESS ASSY AC IN (J48,J480)
9	- -
10	- -
11	PANEL REAR
12	BRACKET HANDLE R
13	PWBA ESS
14	SHIELD ASSY ESS
15	SHIELD ASSY WINDOW
16	FFC ASSY ESS (P28-CNVD)
17	HARNESS ASSY CHUTE (J24-P242,P243,P244,P245,P248)
18	SHIELD PLATE HVPS
19	HVPS/MCU
20	MAYLER HVPS
21	HARNESS ASSY FDR2 (J20-P2083)
22	- -
23	POWER CORD
24	- -
25	BRACKET SHIELD HVPS
26	HARNESS ASSY OCT 1 (J30-P3070)
27	- -
28	HARNESS ASSY TONER 2 (J22-P221)
29	- -
30	DUCT HIGH
31	- -
32	- -
33	CLAMP
34	FILM RH TOP
35	FILM RH FRONT
36	FILM RH REAR
37	INSULATOR FILM LVPS

6. Principals Of Operation

6.1 Theory of Operation

Electrophotography is used in this laser printer to print an image on paper using a video signal sent from the PWBA ESS to the MCU of the HVPS/MCU. The electrophotography is composed of the following 7 steps.

(1) Charging
    Negative charges are uniformly distributed over the surface of the drum by Bias Charge Roll.

(2) Exposure
    The laser scanner scans the surface of the drum with a thin laser beam modulated according to the signal from the PWBA ESS (controller), to create an invisible electrostatic latent image on the drum surface.

(3) Development
    During development, toner particles are attracted to the electrostatic latent image on the drum surface. Thus, a visible toner image is created.

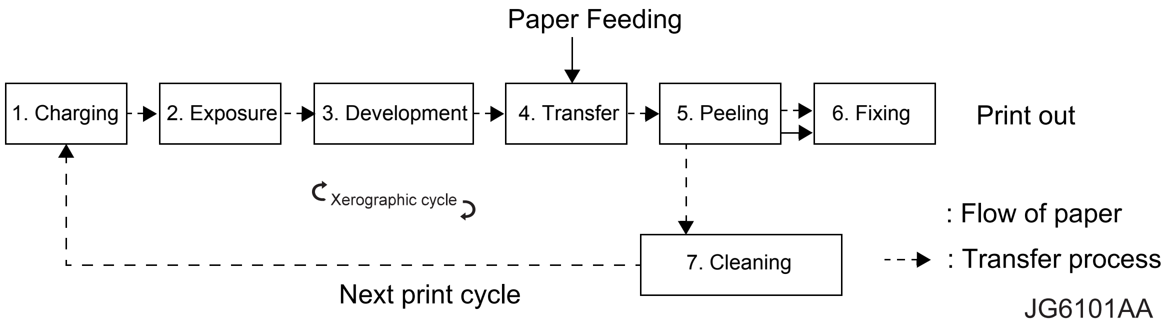
(4) Transfer
    The toner image is transferred from the drum surface to the paper.

(5) Peeling
    Electric charges on the paper are partially neutralized. As a result, the paper is peeled off from the drum surface.

(6) Fixing
    The toner image is permanently fixed to the paper by heat and pressure.

(7) Cleaning
    The remaining toner is removed from the drum surface.

- Summary of print process

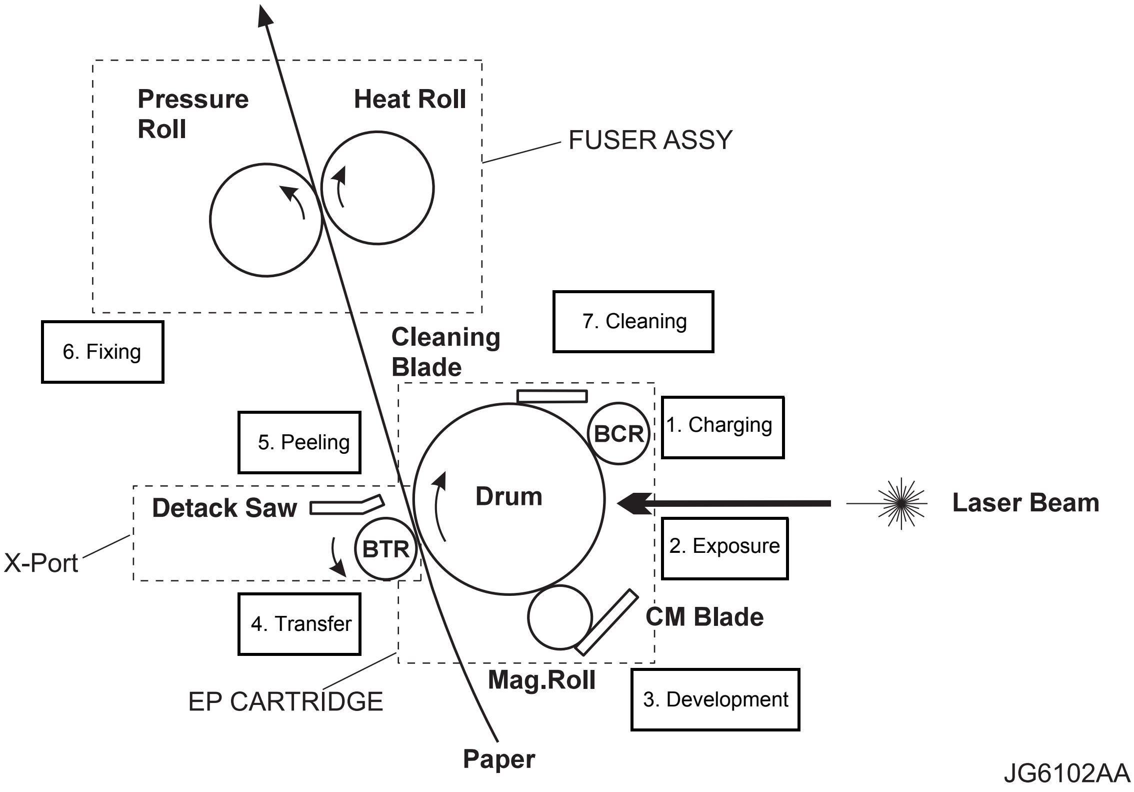


JG6101AA

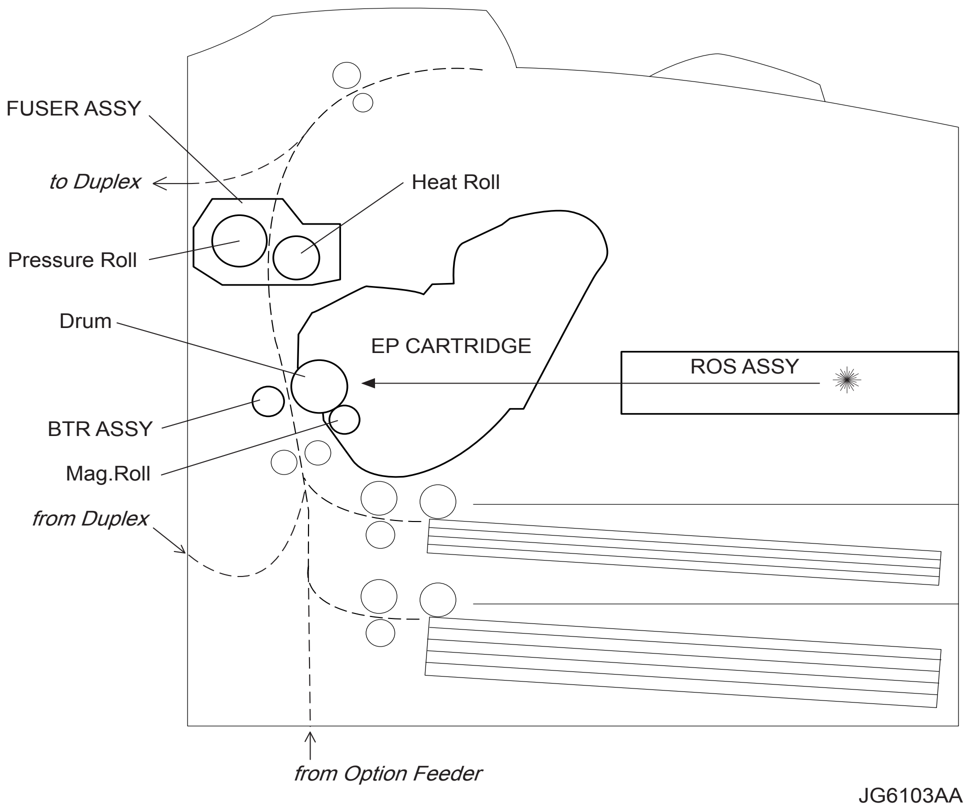
By rotating the drum, the surface undergoes various steps including charging, exposure, development, transfer, peeling, and cleaning. A toner image is created on the surface of the drum and transferred to the paper. The paper is subjected to some steps including transfer, peeling, and fixing by the paper transport mechanism. When the paper is placed in position relative to the image, the toner image is transferred to the paper from the drum surface, and then fixed.

Main components directly associated with the print process and transport of the paper are shown in the following figure.

- Components associated with print process


Pressure Roll
Heat Roll
FUSER ASSY
6. Fixing
7. Cleaning
Cleaning Blade
5. Peeling
BCR
1. Charging
Detack Saw
Drum
Laser Beam
X-Port
BTR
2. Exposure
CM Blade
4. Transfer
Mag.Roll
3. Development
EP CARTRIDGE
Paper
JG6102AA

- Components associated with transport of paper


FUSER ASSY
to Duplex
Heat Roll
Pressure Roll
Drum
EP CARTRIDGE
ROS ASSY
BTR ASSY
Mag.Roll
from Duplex
from Option Feeder
JG6103AA

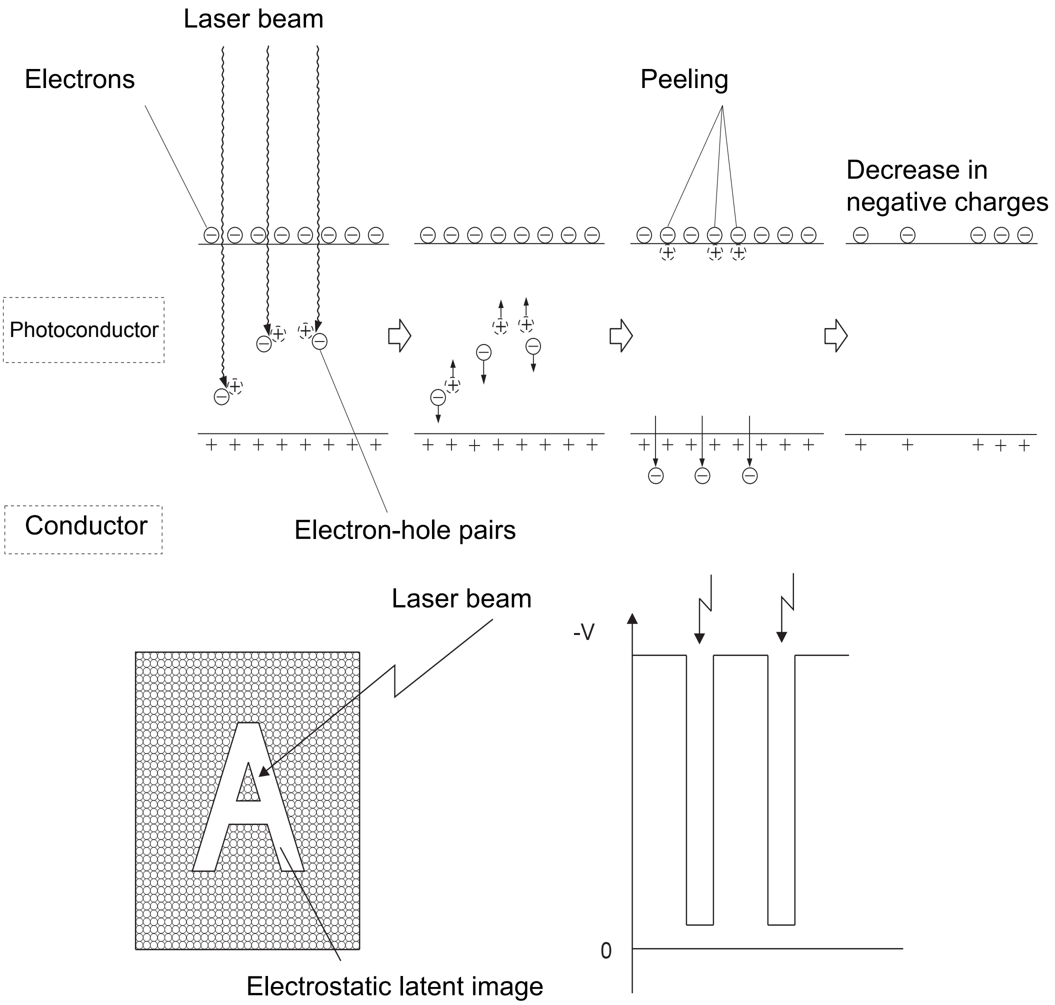
In the exposure step, the surface of the drum negatively charged by the previous charging step is scanned by a thin laser beam. The light radiated from the laser diode of the ROS (Raster Output Scanner) scans the drum from one end to the other. The light passes via a rotating polygon mirror (12 facets) and also via a lens.

The radiation of the laser beam is adjusted according to a video signal from the PWBA ESS.

The laser beam strikes the drum and excites the electrons directed to the photoconductive layer. As a result, electron-hole pairs are induced in the photoconductive layer. Since electrons are moved toward the body inside the drum by the electric field, the electron-hole pairs move to the surface of the photoconductive layer. Negative charges in this portion decrease, thus creating an invisible electrostatic latent image there.

Toner particles are adsorbed onto this electrostatic latent image in the next step. Thus, the image is developed. The toner particles adsorbed to the drum are attracted to positive charges supplied by the BTR, and are transferred to the paper. The drum is sent for peeling and cleaning steps.

- Electrostatic latent image formed on drum


Laser beam
Electrons
Peeling
Decrease in negative charges
Photoconductor
Conductor
Electron-hole pairs
Laser beam
A
-V
0
Electrostatic latent image

JG6104AA

In the cleaning step, the remaining toner is removed from the drum surface. The drum surface is prepared for the next cycle.
The toner is scraped off the drum surface by a cleaning blade.

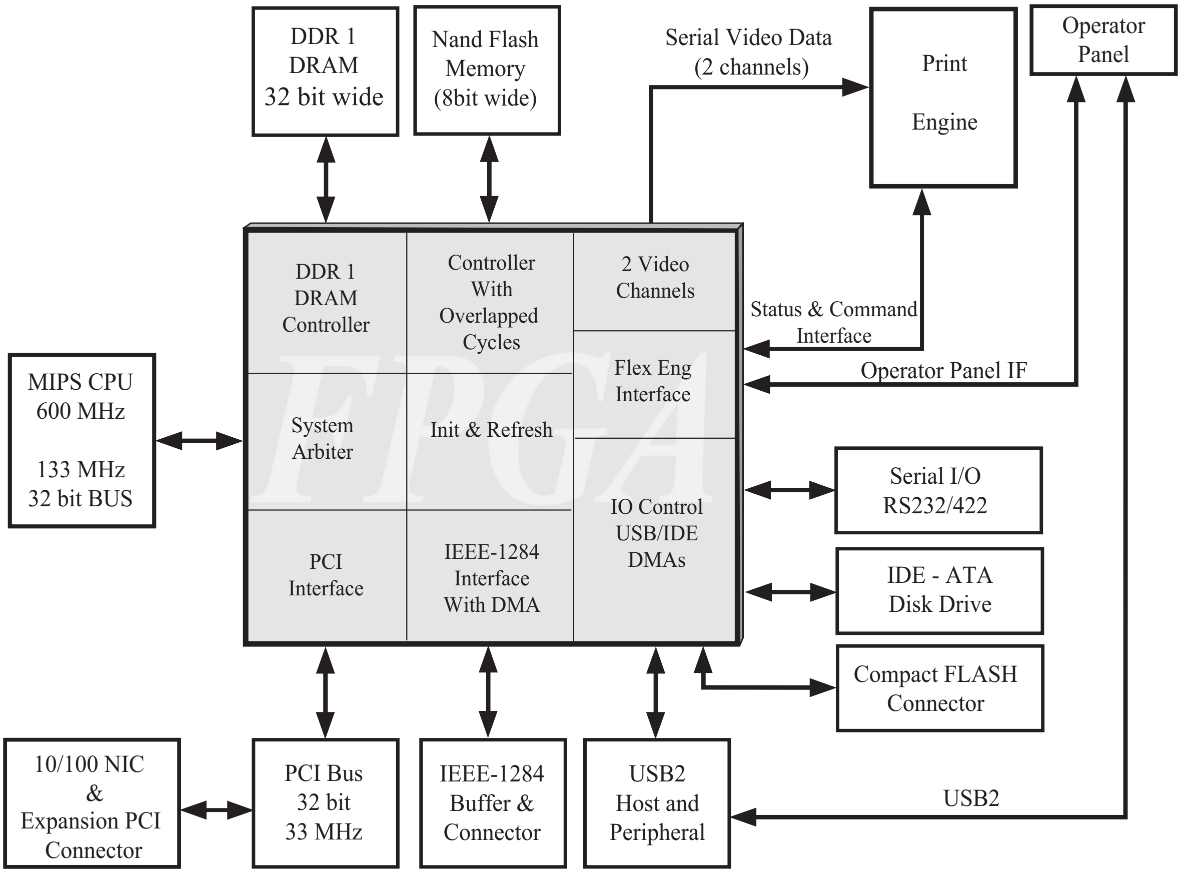
NOTE

The toner scraped off in the cleaning step is collected in a recovery toner compartment partitioned from unused toner. The transfer rate is normally more than 90%, but varies according to the image coverage range and environmental conditions such as temperature and humidity. The used toner cannot be reused.
When the printing step is started, the whole drum surface is scanned with a laser beam. If charges generated in the previous step remain on the drum surface, they are completely removed. When the continuous printing step is started and finished, a negative high voltage is applied to the BTR. If toner particles adhere to the BTR in the previous printing step, the toner particles are returned to the drum surface. In this way, the surface of the BTR is cleaned.

6.2 Controller (ESS)

The printer controller (ESS) is a dedicated computer which creates an image from commands it receives from the host computer sending the document. The controller performs several tasks including:

- Communications with the host computer
- Interpretation and understanding the commands sent to it, which are normally embedded in the data to be printed
- Formatting a page image, including setting the paper size, margins, selecting fonts etc.
- Controlling the feeding of pages and the location of output and sending the image to the print engine
- Communication with the operator/user via the operator panel and embedded web site.


DDR 1
DRAM
32 bit wide
Nand Flash
Memory
(8bit wide)
Serial Video Data
(2 channels)
Print
Engine
Operator
Panel
FPGA
DDR 1
DRAM
Controller
Controller
With
Overlapped
Cycles
2 Video
Channels
Status & Command
Interface
Operator Panel IF
Flex Eng
Interface
MIPS CPU
600 MHz
133 MHz
32 bit BUS
System
Arbiter
Init & Refresh
IO Control
USB/IDE
DMAs
Serial I/O
RS232/422
PCI
Interface
IEEE-1284
Interface
With DMA
IDE - ATA
Disk Drive
Compact FLASH
Connector
10/100 NIC
&
Expansion PCI
Connector
PCI Bus
32 bit
33 MHz
IEEE-1284
Buffer &
Connector
USB2
Host and
Peripheral
USB2

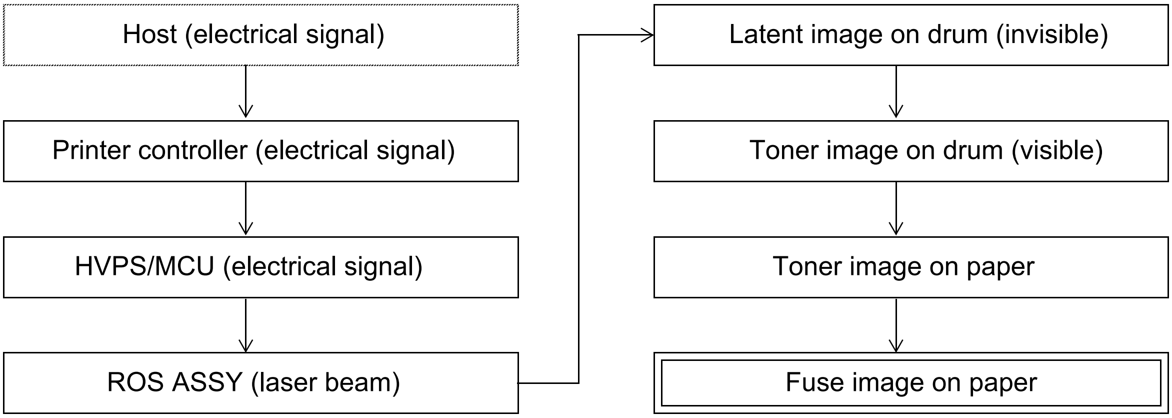
Processor	MIPS R7000 600MHz
Standard/Max RAM	128MB / 640MB
Optional RAM	256MB / 512MB
Standard I/O Hardware	USB 2.0 (Hi-Speed), IEEE1284 (ECP) Parallel, RS-232C Serial, Ethernet 10/100BaseTx
Printer Emulations / Page Description Languages	PCL6, PCL5c, Adobe PostScript 3 (3017), Oki FX-80, Adobe PDF (1.6)
Printer Drivers	PCL5e, PCL6, PostScript
Compact Flash	Socket Standard
Compact Flash Memory size	1GB, 2GB, 4GB Optional (Oki supplied)
Hard Disk Drive	40GB or more, 2.5 inch, ATA - IDE with mounting kit – Optional (Oki supplied)
Flash Drive for PDF Printing	USB 2.0 Flash Drive Interface, Host USB 2.0 Hi-Speed
User Flash (On-board)	40MB
System Flash (On-board)	24MB
10/100/1000BaseT	Option card; when installed, onboard network port is disabled

6.2.1 Identification

USB Vendor ID	USB Product ID	Plug N Play ID	Model Name
06BC	0262	OKI_DATA_CORPB710n6A62	B710n
06BC	0263	OKI_DATA_CORPB720n6A92	B720n
06BC	0264	OKI_DATA_CORPB730nAAC3	B730n

The USB, Parallel, Ethernet, and Serial ports on the Controller (ESS) receive data from the host. The ESS buffers the rasterized bit-image host data or converts host data in PDL (Page Description Language) into rasterized bit-image data. The ESS sends each line of the rasterized bit-image data to the HVPS/MCU whenever the laser beam makes a scan. This signal carrying image data (/VDO signal) is converted into LVDS signal by the HVPS/MCU, and is sent as XP.DATA+ and XP.DATA- signals to the ROS ASSY, where the signal is converted into a laser beam. The beam is turned ON and OFF according to the video signal. The laser beam is reflected off the surface of a rotating polygon mirror, so that the beam is concentrated to the surface of the drum of the EP CARTRIDGE by a series of lenses. As a result, an electrostatic latent image is created on the drum surface.

Print data (electrical signal) from the printer controller is converted into a print image through the following flow.


Host (electrical signal)
Printer controller (electrical signal)
HVPS/MCU (electrical signal)
ROS ASSY (laser beam)
Latent image on drum (invisible)
Toner image on drum (visible)
Toner image on paper
Fuse image on paper

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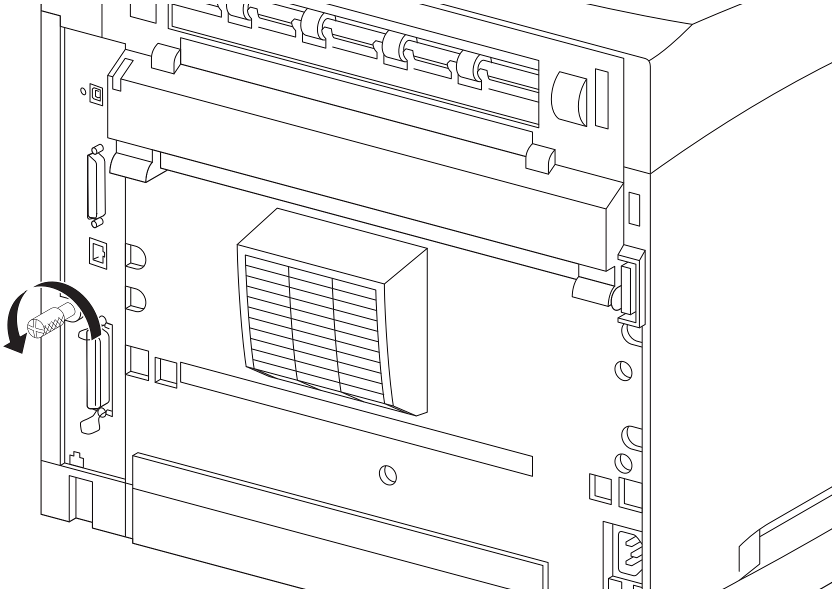
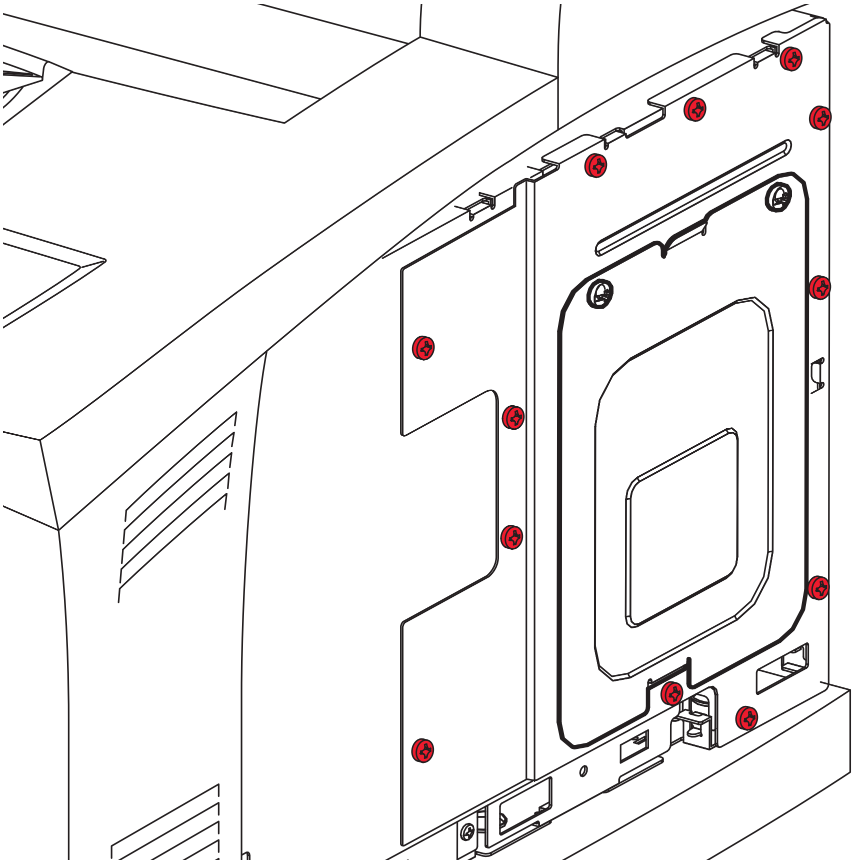
6.3 Controller (ESS) / Replacement Removal Procedure

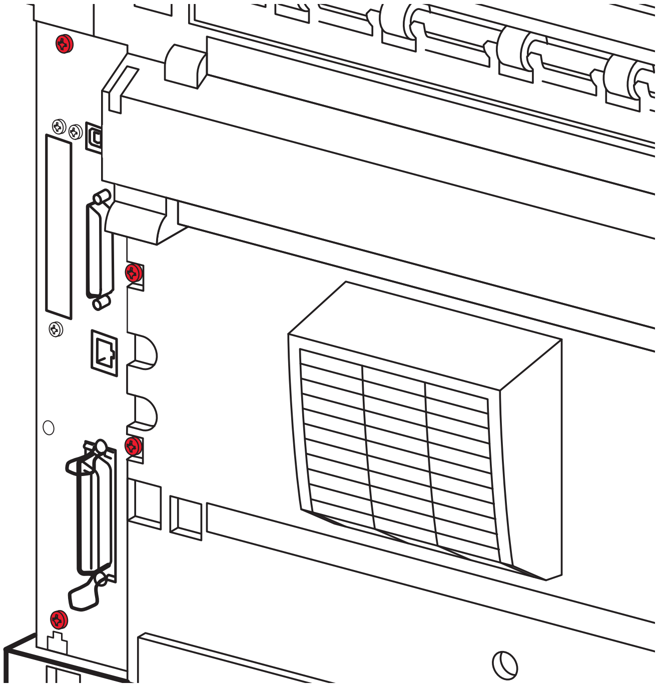
6.3.0.1 Remove the COVER RIGHT (PL1.1.4). (RRP1.2)



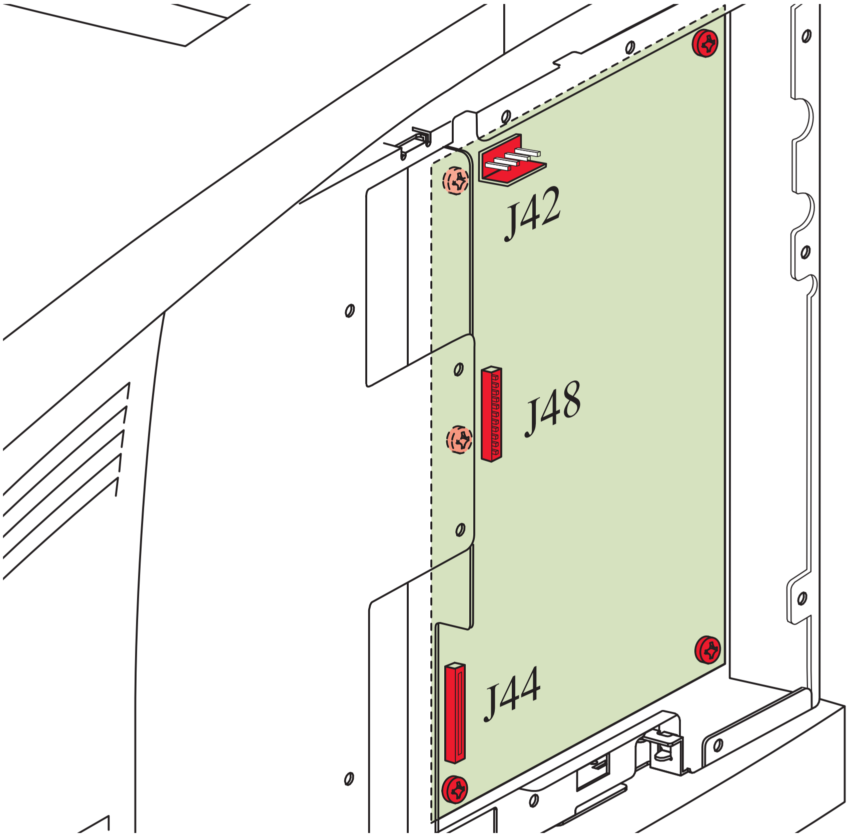
6.3.0.2 Remove the SHIELD ASSY ESS (PL12.1.14). (RRP12.7)



6.3.0.3 Remove the I/O BRACKET ASSEMBLY



6.3.0.4 Remove the CONTROLLER (ESS)



Removal

1) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
2) Remove the SHIELD ASSY ESS (12 Screws) (PL12.1.14). (RRP12.7)
3) Remove the I/O BRACKET ASSEMBLY (4 Screws). See illustration 6.3.0.3
4) Remove the CONTROLLER ESS ASSEMBLY (5 Screws). See illustration 6.3.0.4
5) Remove the CONTROLLER ESS ASSEMBLY (3 Connectors) / (J42,44& 48). See illustration 6.3.0.4
6) After the screws and connectors have been removed the controller, allow the bottom edge of the Controller (ESS) to drop down into the black plastic wire harness chase and tilt the top edge towards you to allow the top edge to clear the top frame of the card cage and then lift out the Controller (ESS).

Replacement

1) Place the bottom edge of the controller into the card cage slightly down into the black plastic wire harness chase and tilt the top edge of the controller into the card cage. Once clear of the top edge frame of the card cage, lift the controller into allignment with the mounting holes.
2) Loosely install the CONTROLLER ESS ASSEMBLY (5 Screws). See illustration 6.3.0.4
3) Replace the I/O BRACKET ASSEMBLY (4 Screws). See illustration 6.3.0.3
4) Replace the CONTROLLER ESS ASSEMBLY (3 Connectors) / (J42,44& 48)
5) Connector J48 requires a Ground lug connection to the adjacent controller mounting screw.
6) Tighten the CONTROLLER ESS ASSEMBLY (5 Screws). See illustration 6.3.0.4
7) Replace the SHIELD ASSY ESS (12 Screws) (PL12.1.14). (RRP12.7)
8) Replace the COVER RIGHT (PL1.1.4). (RRP1.2)

6.4 Controller (ESS) Options

Controller ESS Option Configuration

The ESS has several options that can be installed to enhance performance:

- Hard Drive (HDD) 2.5" ATA-IDE
- Compact Flash (CF)
- DRAM Memory Module
- Network Interface Card (NIC) 10/100/1000 Base Tx

6.5 Controller (ESS) Option Installation

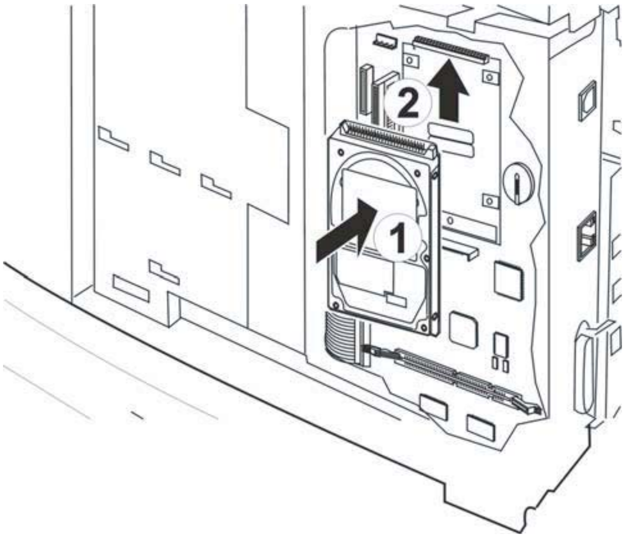
6.5.1 Installing the HDD

1. Turn the printer power OFF and remove the power cord from the outlet.
2. Remove the COVER RIGHT (RRP1.2) (PL1.1.4)
3. Remove the SHIELD ASSY WINDOW (RRP12.8) (PL12.1.15)

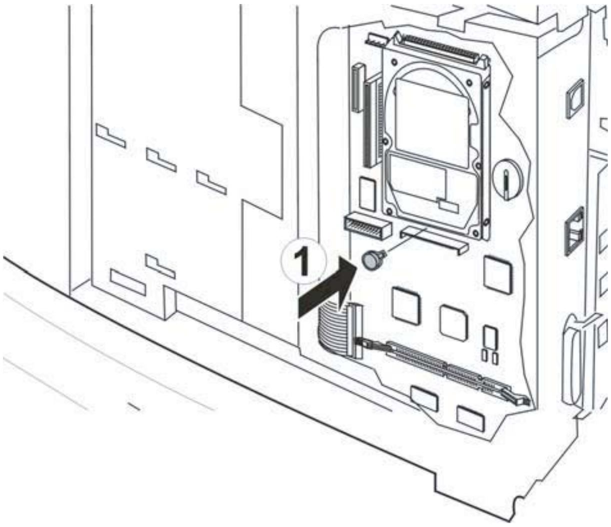
NOTE: In the step that follows take care when seating the device. The pins are fragile and can be easily damaged.

---

4. Seat the HDD in the ESS PWB (See figure below)



5. Push the latch into position to secure the HDD (See figure below)



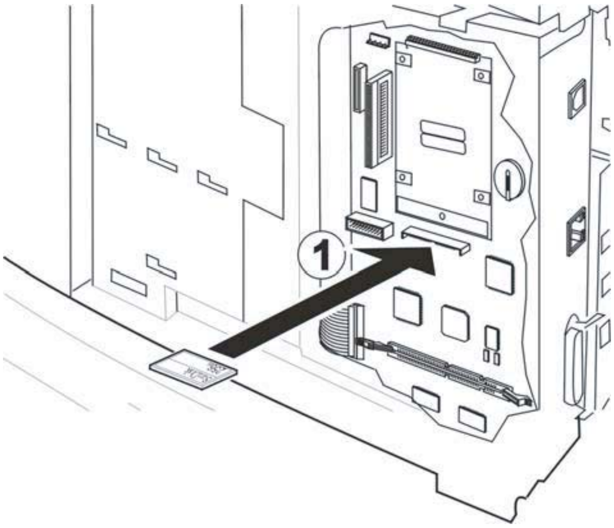
Note: When the HDD is correctly installed the two sets of pins on the left hand side will not be connected to anything and the hole in the metal mounting bracket will be located over the hole in the printed circuit board. Only install HDDs with the mounting bracket attached. Use the plastic rivet pin to atttach the bracket to the PCB.

6. Replace the SHIELD ASSY WINDOW.
7. Replace the COVER RIGHT.
8. Plug the power cord into the AC outlet and turn the printer power ON.

6.5.2 Installing the Compact Flash

1. Turn the printer power OFF and remove the power cord from the outlet.
2. Remove the COVER RIGHT (RRP1.2) (PL1.1.4).
3. Remove the SHIELD ASSY WINDOW (RRP12.8) (PL12.1.15).

4. Align the CF with the socket on the ESS PWB (See figure below).



NOTE: In the step that follows take care when seating the device. The pins are fragile and can be easily damaged.

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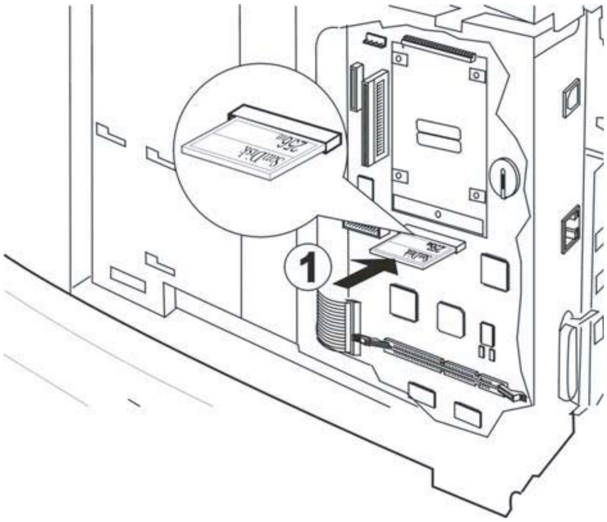
5. Carefully seat the CF in the socket on the ESS PWB (See figure below).

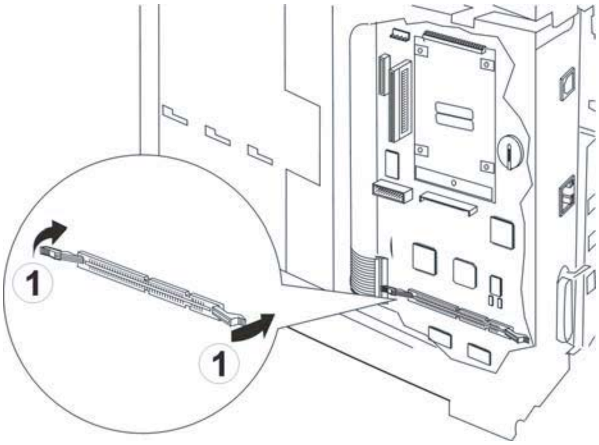


6. Replace the SHIELD ASSY WINDOW.
7. Replace the COVER RIGHT.
8. Plug the power cord into the AC outlet and turn the printer power ON.
9. Replace the COVER RIGHT.
10. Plug the power cord into the AC outlet and turn the printer power ON.

6.5.3 Installing the DRAM Module

1. Turn the printer power OFF and remove the power cord from the outlet.

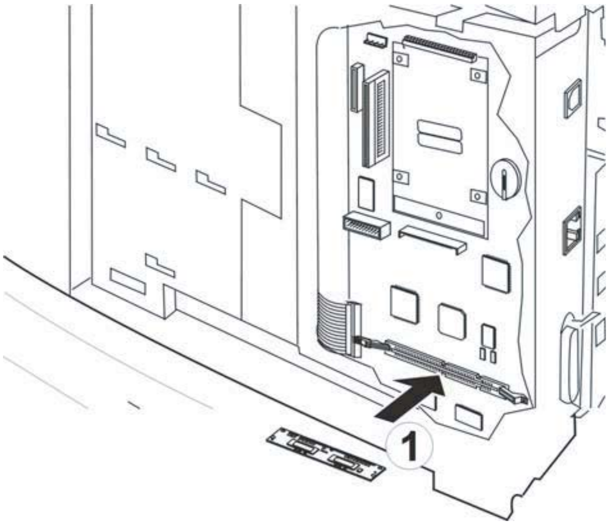
2. Remove the COVER RIGHT (RRP1.2) (PL1.1.4).
3. Remove the SHIELD ASSY WINDOW (RRP12.8) (PL12.1.15).
4. Release the latches on the DRAM Module socket (See figure below).



NOTE: In the step that follows take care when seating the device. The pins are fragile and can be easily damaged.

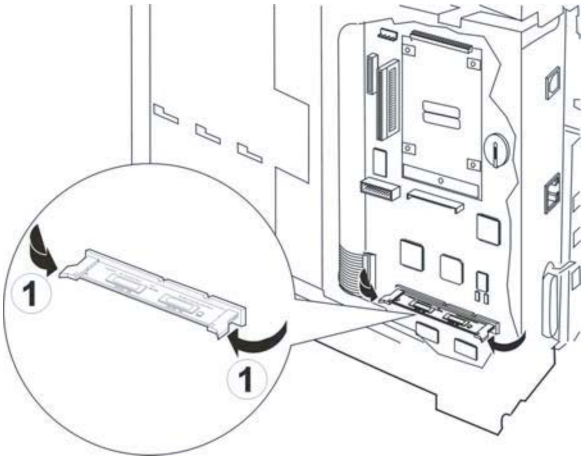
---

5. Carefully align the DRAM Module with the socket on the ESS PWB (See figure below).



6. Seat the DRAM Module into the socket on the ESS.

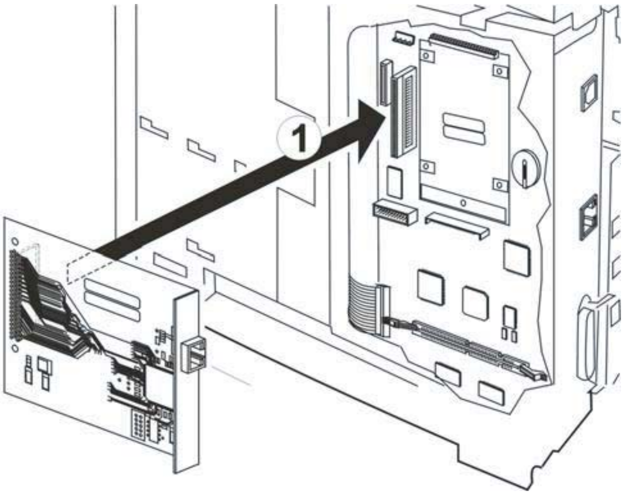
7. Open the latches on the DRAM Module socket firmly capturing the Card (See figure below).



8. Replace the SHIELD ASSY WINDOW.
9. Replace the COVER RIGHT.
10. Plug the power cord into the AC outlet and turn the printer power ON.

6.5.4 Installing the NIC

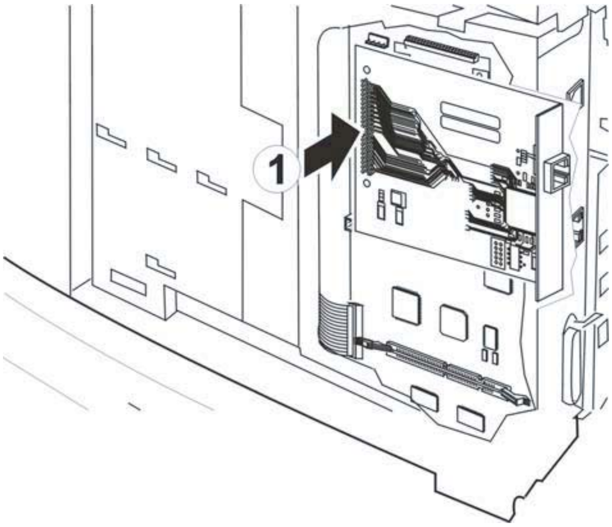
1. Turn the printer power OFF and remove the power cord from the outlet.
2. Remove the COVER RIGHT (RRP1.2) (PL1.1.4).
3. Remove the SHIELD ASSY WINDOW (RRP12.8) (PL12.1.15).
4. Remove the I/O Expansion Option blank metal cover / (2) screws
5. Align the NIC with the socket on the ESS PWB (See figure below).



NOTE: In the step that follows take care when seating the device. The pins are fragile and can be easily damaged.

---

6. Carefully seat the NIC in the socket on the ESS PWB (See figure below).

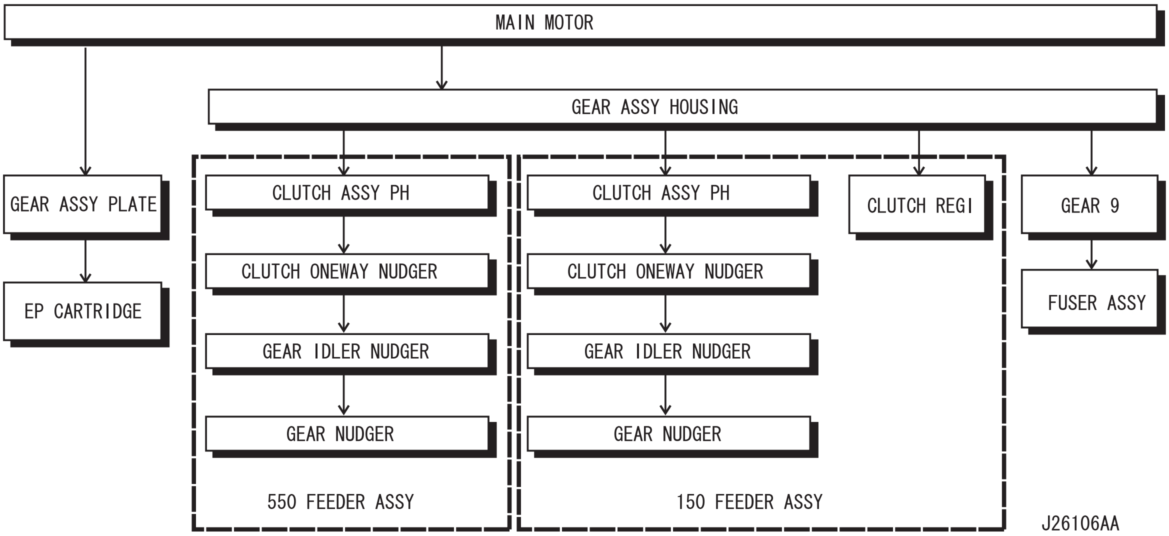


7. Replace the (2) screws recovered from the I/O Expansion Option blank metal cover.
8. Replace the SHIELD ASSY WINDOW.
9. Replace the COVER RIGHT.
10. Plug the power cord into the AC outlet and turn the printer power ON.

6.6 Driving Force Transmission Path

6.6.1 MAIN MOTOR

The rotating force of the MAIN MOTOR is transmitted via gears in the GEAR ASSY HOUSING and via the GEAR ASSY PLATE to components that need mechanical driving force as shown in the following flow.


MAIN MOTOR
GEAR ASSY HOUSING
GEAR ASSY PLATE
EP CARTRIDGE
CLUTCH ASSY PH
CLUTCH ONEWAY NUDGER
GEAR IDLER NUDGER
GEAR NUDGER
550 FEEDER ASSY
CLUTCH ASSY PH
CLUTCH ONEWAY NUDGER
GEAR IDLER NUDGER
GEAR NUDGER
150 FEEDER ASSY
CLUTCH REGI
GEAR 9
FUSER ASSY
J26106AA

The driving force transmitted to the EP CARTRIDGE drives the Drum, and is transmitted to the BTR ASSY through the Drum Gear.

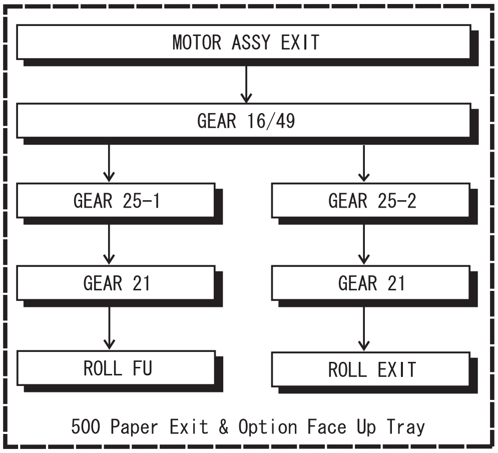
The driving force transmitted to the 550 FEEDER ASSY drives the ROLL ASSY NUDGER and ROLL ASSY FEED.

The driving force transmitted to the 150 FEEDER ASSY drives the ROLL REGI METAL and ROLL REGI RUBBER, as well as the ROLL ASSY NUDGER and ROLL ASSY FEED.

The driving force transmitted to the FUSER ASSY drives the Heat Roll.

6.6.2 MOTOR ASSY EXIT

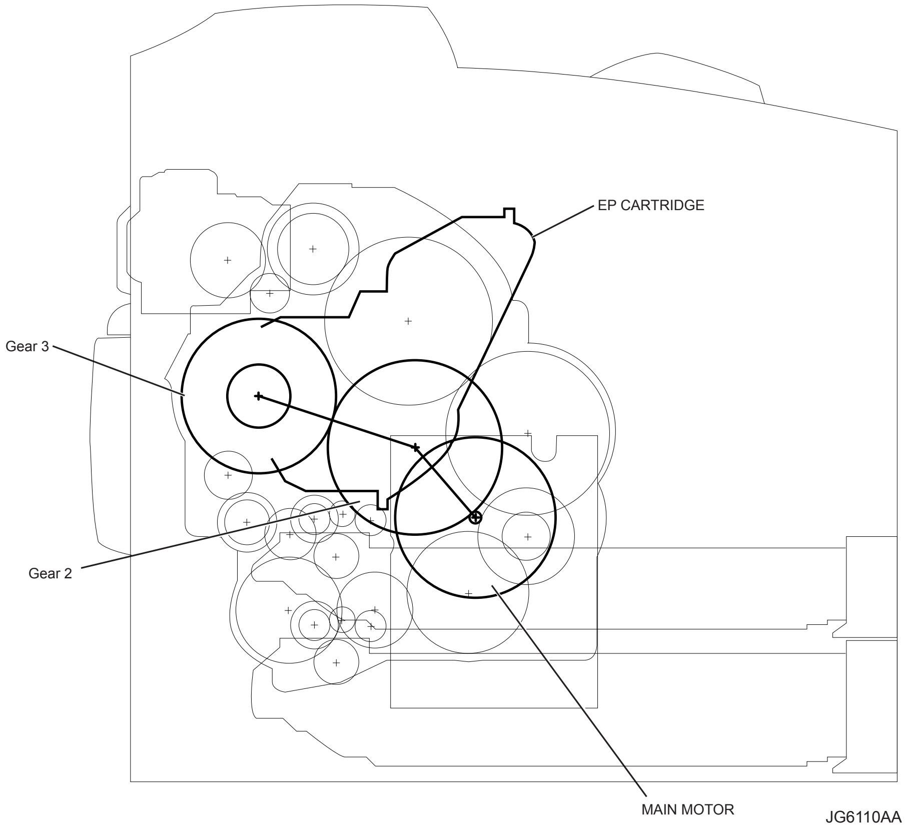
The rotating force of the MOTOR ASSY EXIT is transmitted via various gears to components that need mechanical driving force as shown in the following flow.


MOTOR ASSY EXIT
GEAR 16/49
GEAR 25-1
GEAR 25-2
GEAR 21
GEAR 21
ROLL FU
ROLL EXIT
500 Paper Exit & Option Face Up Tray

J26107AA

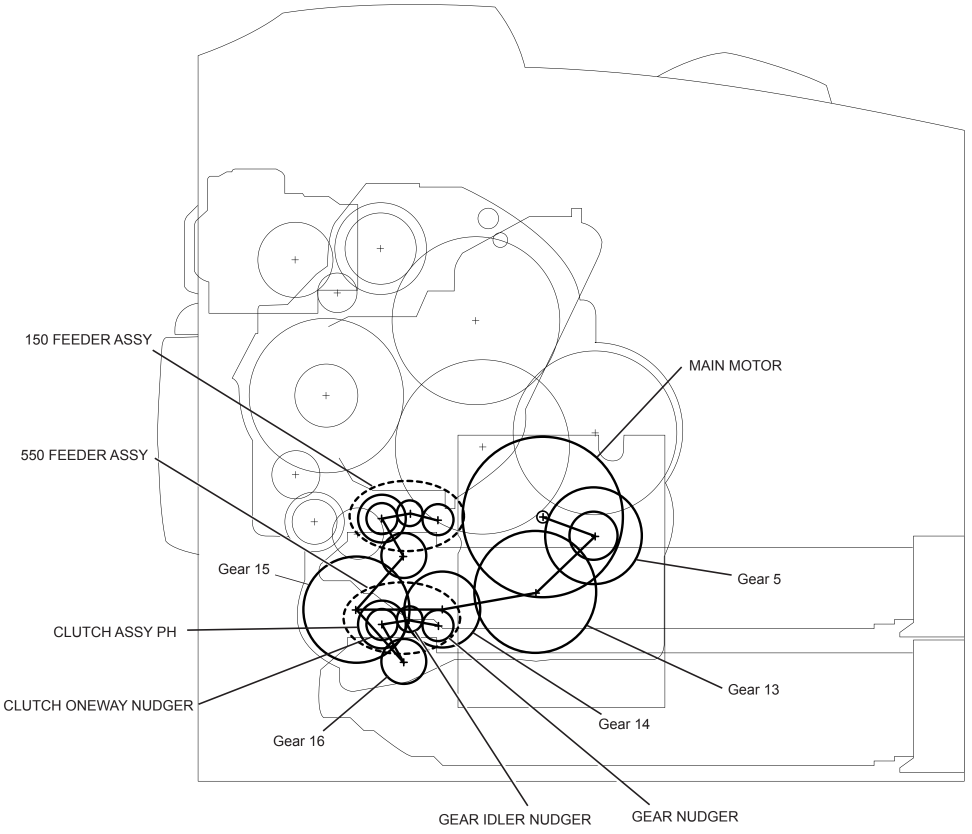
6.6.3 Gear Layout

- Drive path in EP CARTRIDGE


EP CARTRIDGE
Gear 3
Gear 2
MAIN MOTOR

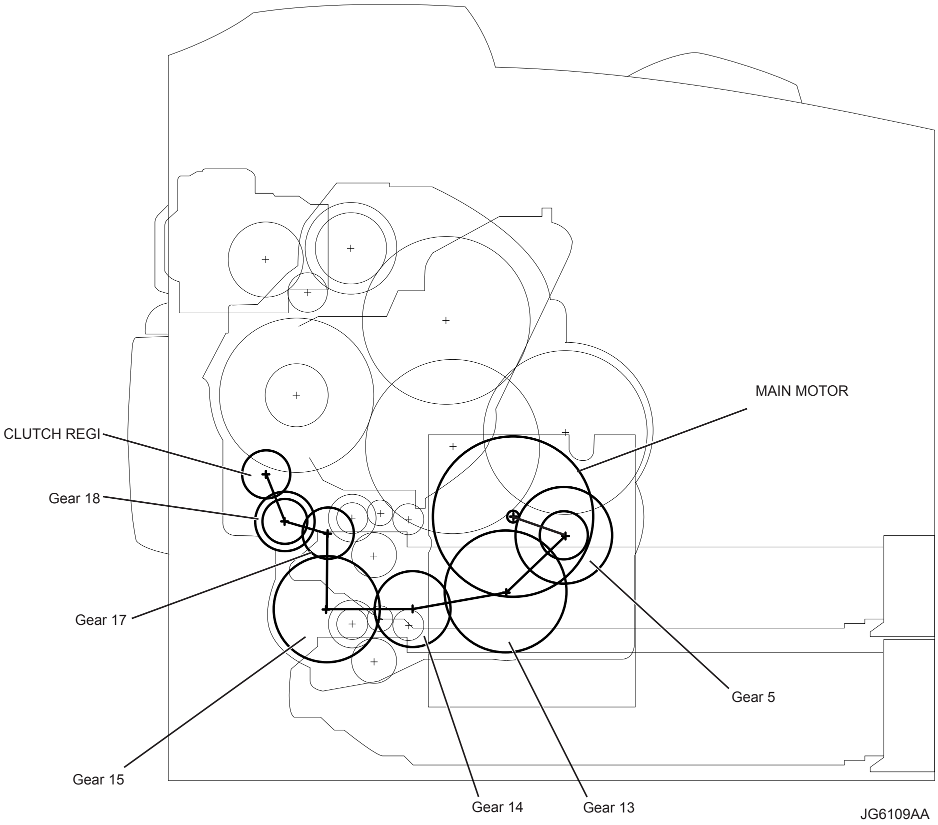
JG6110AA

6.6.4 • Drive path in FEEDER ASSY

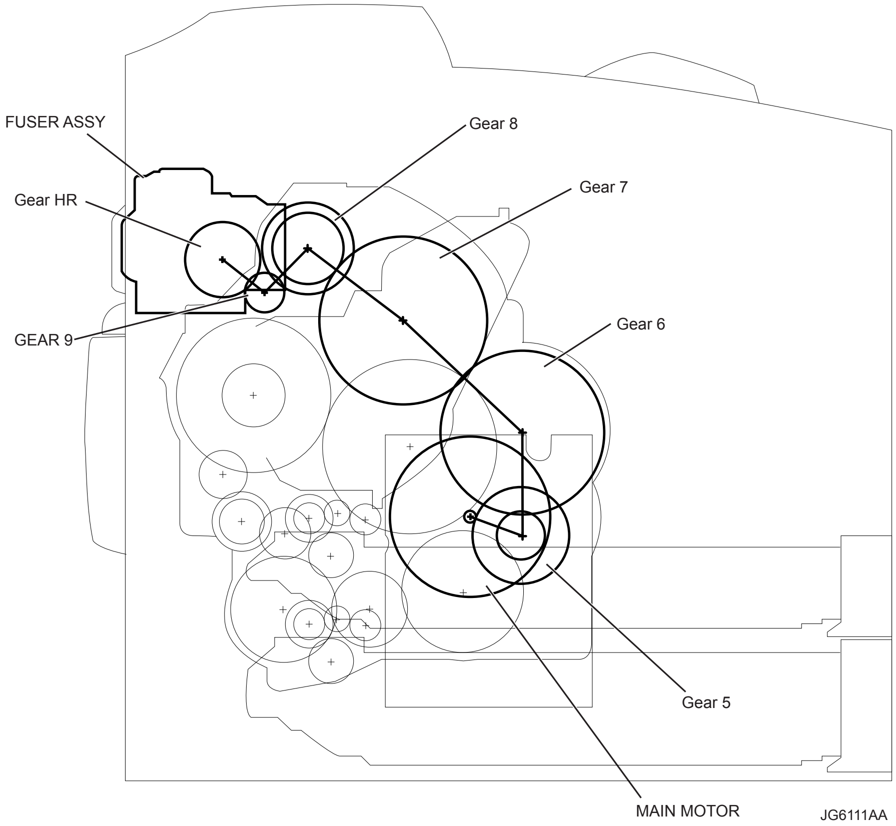

150 FEEDER ASSY
550 FEEDER ASSY
MAIN MOTOR
Gear 15
Gear 5
CLUTCH ASSY PH
Gear 13
CLUTCH ONEWAY NUDGER
Gear 14
Gear 16
GEAR IDLER NUDGER
GEAR NUDGER

J26108AA

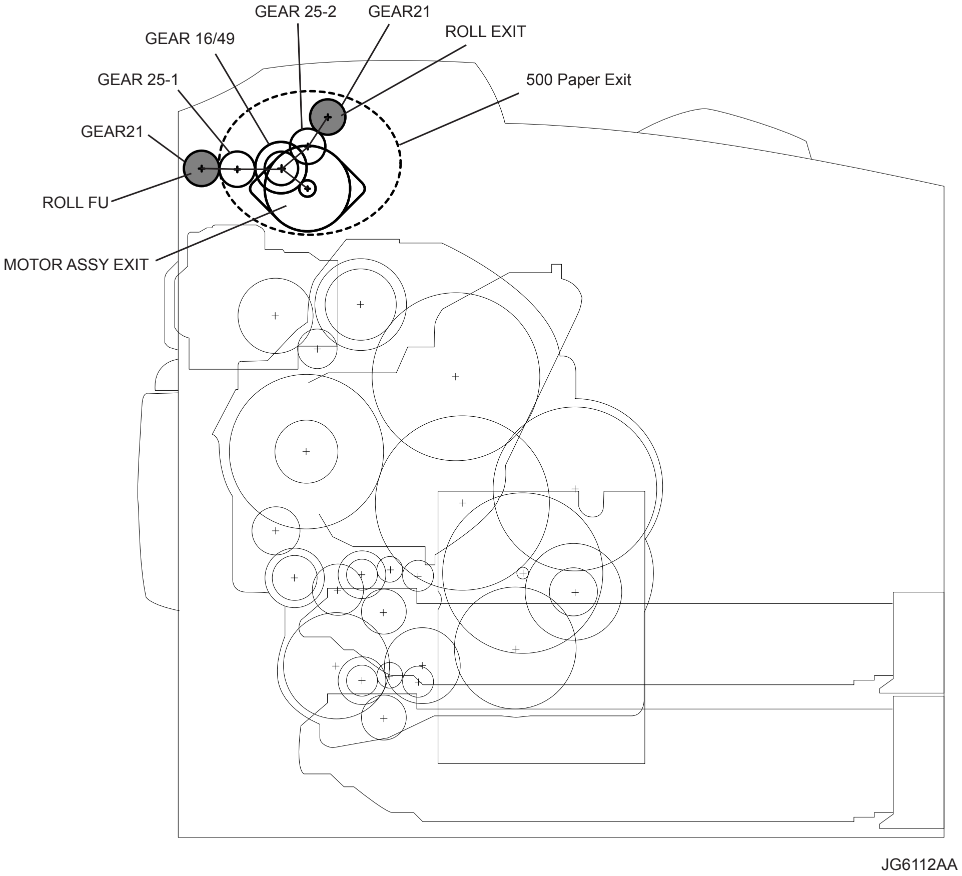
6.6.5 • Drive path in CLUTCH REGI


MAIN MOTOR
CLUTCH REGI
Gear 18
Gear 17
Gear 15
Gear 14
Gear 13
Gear 5
JG6109AA

6.6.6 • Drive path in FUSER ASSY


FUSER ASSY
Gear HR
GEAR 9
Gear 8
Gear 7
Gear 6
Gear 5
MAIN MOTOR
JG6111AA

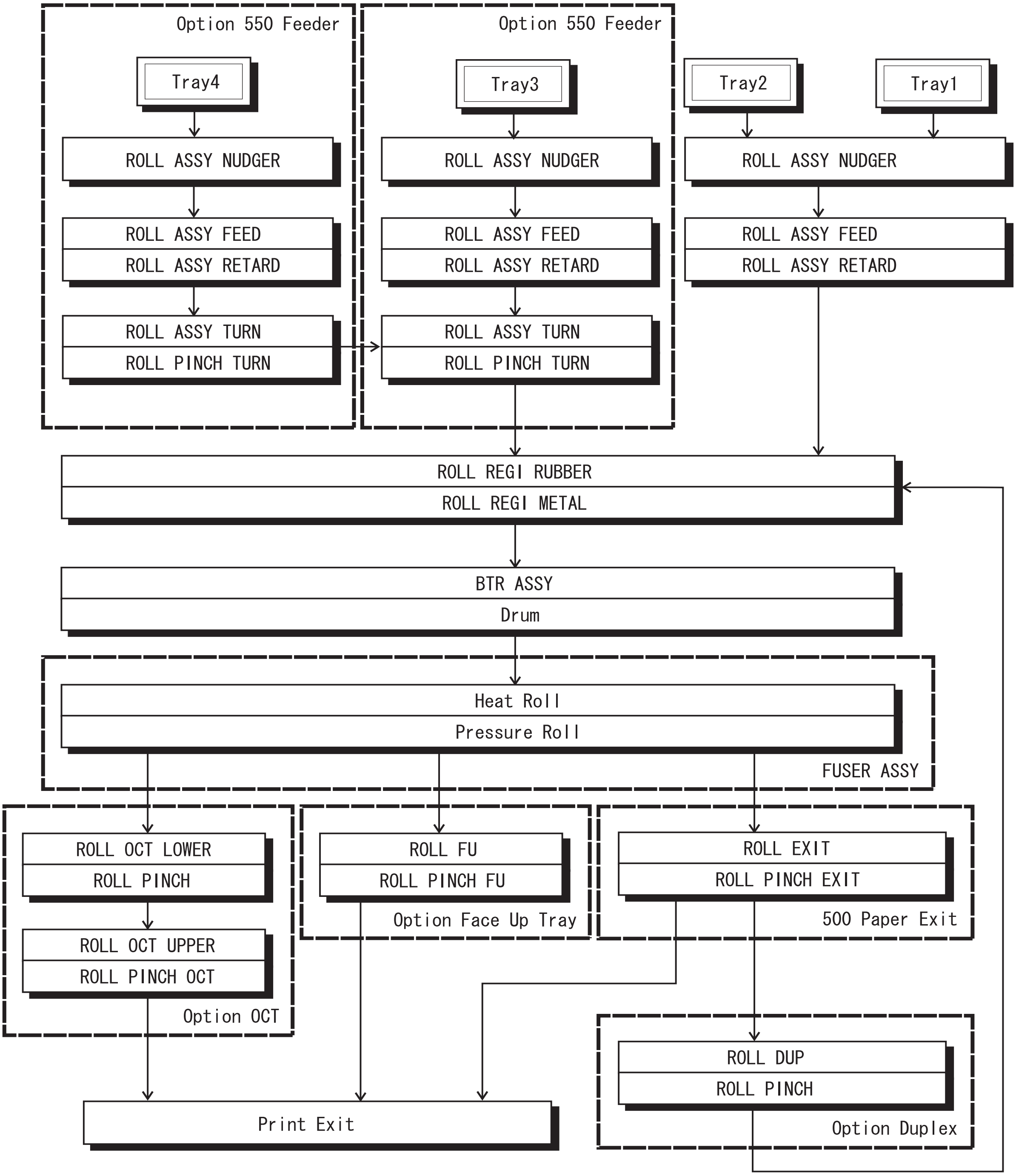
6.6.7 • Drive path in 500 Paper Exit & Option Face Up Tray


GEAR 25-2
GEAR21
GEAR 16/49
ROLL EXIT
GEAR 25-1
500 Paper Exit
GEAR21
ROLL FU
MOTOR ASSY EXIT
JG6112AA

6.7 Paper Transport

6.7.1 Paper Transport Path

The paper is supplied from the Tray1 and Tray 2 or the optional Tray3 and Tray 4, and is transported into the printer along the paper path shown below.


Option 550 Feeder
Tray4
ROLL ASSY NUDGER
ROLL ASSY FEED
ROLL ASSY RETARD
ROLL ASSY TURN
ROLL PINCH TURN
Option 550 Feeder
Tray3
ROLL ASSY NUDGER
ROLL ASSY FEED
ROLL ASSY RETARD
ROLL ASSY TURN
ROLL PINCH TURN
Tray2
Tray1
ROLL ASSY NUDGER
ROLL ASSY FEED
ROLL ASSY RETARD
ROLL REGI RUBBER
ROLL REGI METAL
BTR ASSY
Drum
Heat Roll
Pressure Roll
FUSER ASSY
ROLL OCT LOWER
ROLL PINCH
ROLL OCT UPPER
ROLL PINCH OCT
Option OCT
ROLL FU
ROLL PINCH FU
Option Face Up Tray
ROLL EXIT
ROLL PINCH EXIT
500 Paper Exit
ROLL DUP
ROLL PINCH
Option Duplex
Print Exit

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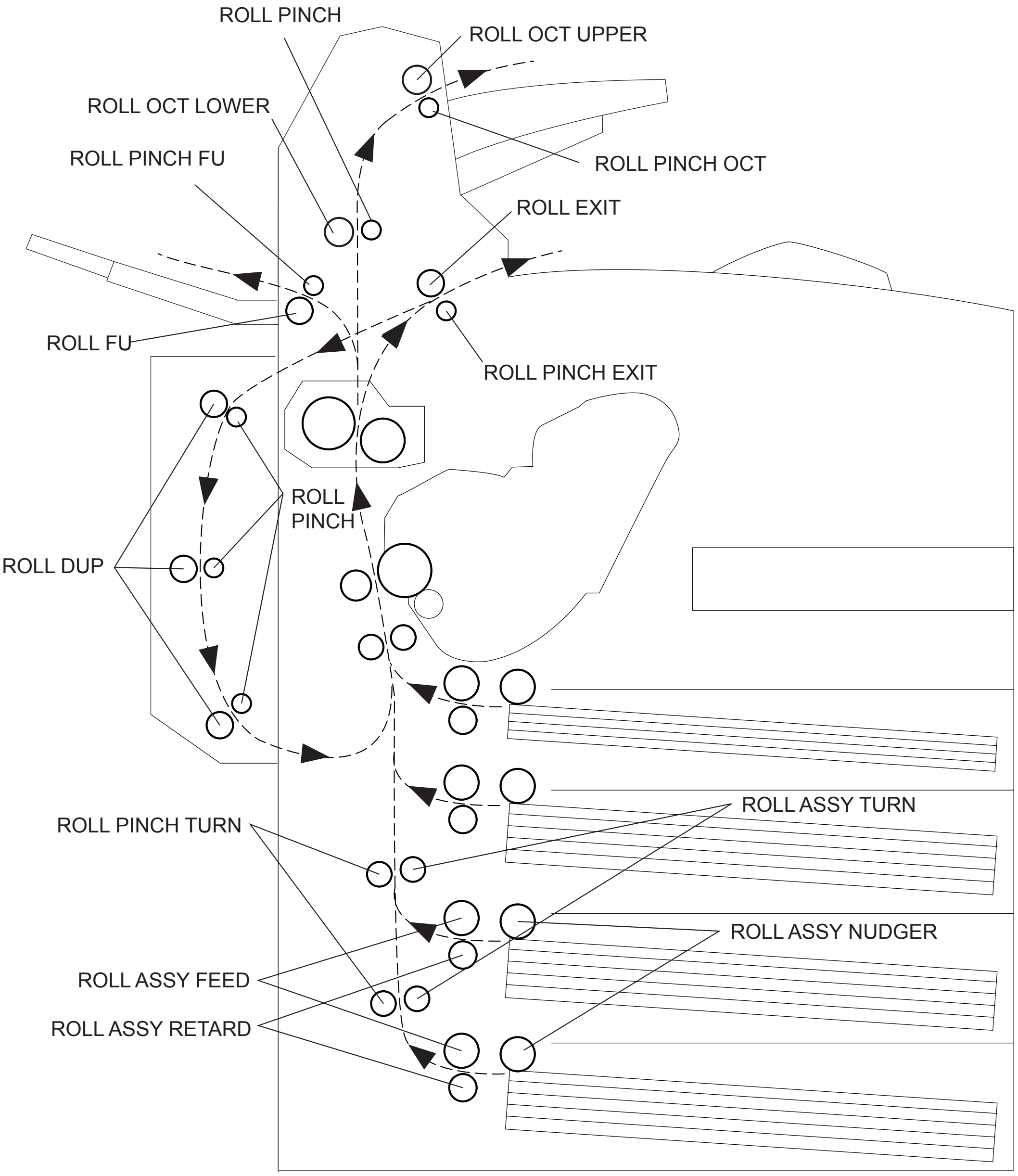
6.7.2 Layout of Paper Transport Path

The following is a cross section of the printer. Main components directly associated with the paper path and transport are shown here.

- Main components associated with transport of paper
(when Option Duplex, Option 550 Feeder, Option OCT and 500 Paper Exit & Option Face Up Tray are installed)


ROLL PINCH
ROLL OCT UPPER
ROLL OCT LOWER
ROLL PINCH FU
ROLL PINCH OCT
ROLL EXIT
ROLL FU
ROLL PINCH EXIT
ROLL PINCH
ROLL DUP
ROLL ASSY TURN
ROLL PINCH TURN
ROLL ASSY NUDGER
ROLL ASSY FEED
ROLL ASSY RETARD

JG6115AA

6.8 Actions of Main Functional Components

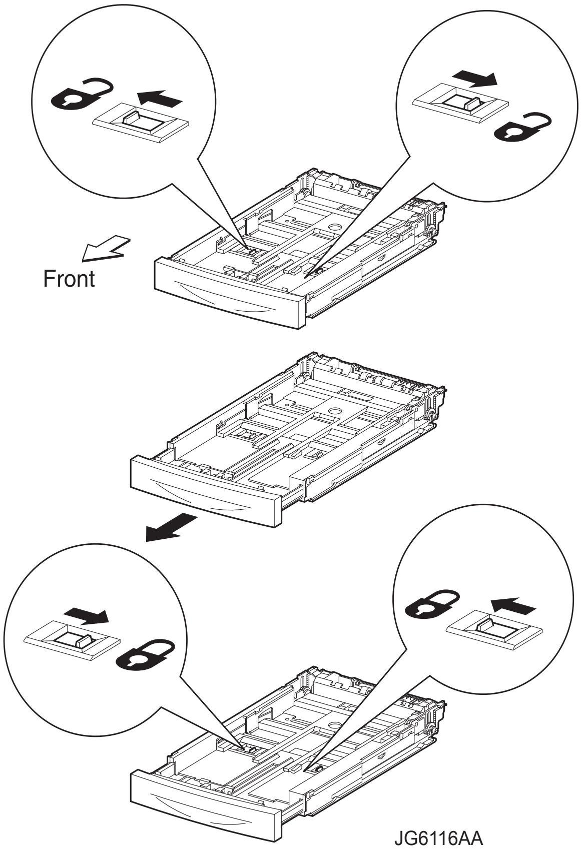
The functions of the main components of the this laser printer are described in the following sections:

5.1 Paper Cassette
5.2 Paper Feeder
5.3 Xero
5.4 Fuser
5.5 500 Paper Exit & Option Face Up Tray
5.6 Drive
5.7 Electrical

6.9 Paper Cassette

Paper cassette models available include the 150 Paper Cassette and the 550 Paper Cassette. They are functionally equivalent, therefore only the 150 Paper Cassette is described here. Since a LOW INDICATOR does not exist on the 150 models, explanation for this indicator applies to the 550 Paper Cassette only.

If the paper is smaller than A4, adjust the GUIDE ASSY END 150 and GUIDE ASSY SD on the Paper Cassette to match the size. If the paper is larger than A4, disengage the EXTENSION that locks the HOUSING BASE 150 and HOUSING EXTENSION 150, and pull out the extension. Then adjust the GUIDE ASSY END 150 and GUIDE ASSY SD to match the size. When the extension is returned its original position, the LOCK EXTENSION locks automatically.



6.9.1 GUIDE ASSY L150 and GUIDE ASSY SD R150

The GUIDE ASSY SD R150 can be adjusted to different paper sizes by moving it to the left or right. The guides come into contact with the left and right edges of the paper and hold it in position. The GUIDE ASSY SD L150 moves simultaneously with the GUIDE ASSY SD R150.

6.9.2 LOCK EXTENSION

The 150 Paper Cassette is so constructed that it can cope with the length of the paper in the direction of travel by moving the position of the HOUSING EXTENSION150 forward and backward. The LOCK EXTENSION is adopted as a mechanism for holding the HOUSING EXTENSION150 in position.

6.9.3 GUIDE ASSY END150

This can be adjusted to different paper sizes by making a forward or backward adjustment. This makes contact with the rear end of the paper, and holds it in position in the forward and rearward directions.

The paper size to which the cassette is set is transmitted to the LINK SW SIZE 1/2/3 via the GEAR SECTOR and RACK SIZE by the GUIDE ASSY END150. The three LINK SW SIZE units turns ON or OFF respectively according to the transmitted paper size. The paper size is detected by transmitting the ON/OFF information to the Size Switch in the GUIDE TRAY LEFT. The types of paper that can be automatically detected are as follows:

Type	Size (mm × mm)
Letter SEF	215.9 × 279.4
Legal 14" SEF	215.9 × 355.6
Legal 13" SEF	215.9 × 330.2
Executive SEF	184.2 × 266.7
A4 SEF	210.0 × 297.0
B5 (JIS) SEF	182.0 × 257.0
A5 SEF	148.5 × 210.0

6.9.4 LEVER BTM LOCK and STOPPER GEAR

These are at the rear end of the cassette (i.e. the exit path of the paper). When the cassette is inserted into the printer, the protrusions on the Feeder trigger the mechanism that depresses the LEVER BTM LOCK, slides the RACK BTM LOCK 150, and then simultaneously unlocks the GEAR PINION and GEAR PB R of the STOPPER GEAR.

6.9.5 PLATE ASSY BTM

The force pushing up the PLATE ASSY BTM is supplied via the SPRING BTM UP150 by unlocking the LEVER BTM LOCK and STOPPER GEAR. When the PLATE ASSY BTM is pushed up, the supplied paper and ROLL ASSY NUDGER touch each other.

6.9.6 LOW INDICATOR

The LOW INDICATOR is installed only on the 550 Paper Cassette. The amount of paper remaining in the cassette is indicated by the LOW IND FRONT. As the amount of paper reduces, the PLATE ASSY BTM rises and the LOW IND FRONT goes down in the GUIDE INDICATOR.

6.9.6.1 150 Sheet Paper Cassette

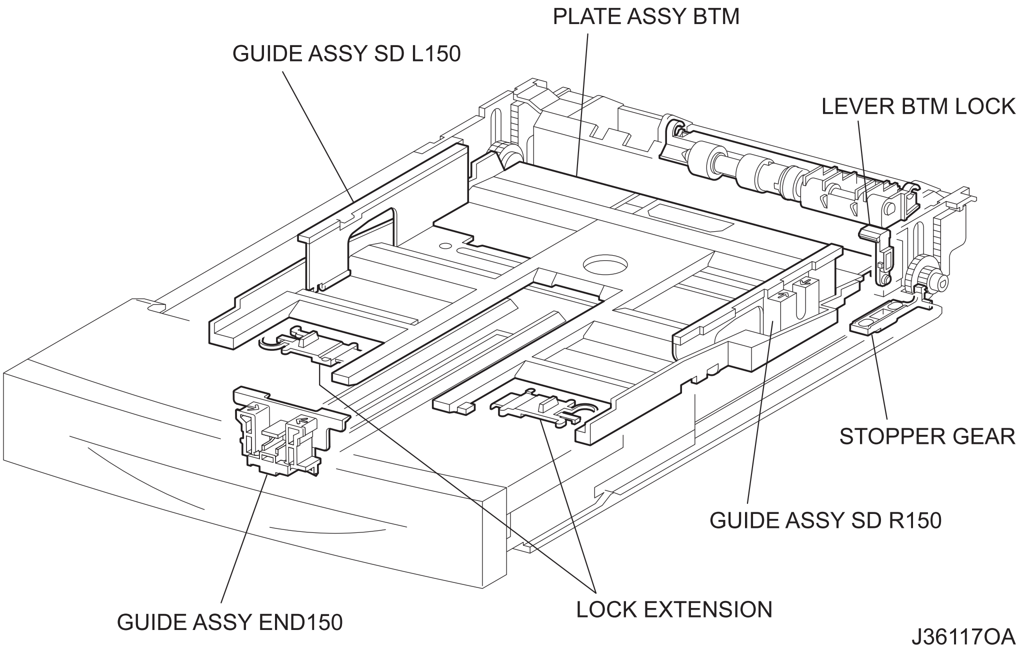


PLATE ASSY BTM
GUIDE ASSY SD L150
LEVER BTM LOCK
STOPPER GEAR
GUIDE ASSY SD R150
LOCK EXTENSION
GUIDE ASSY END150
J36117OA

6.9.6.2 ● 550 Paper Cassette

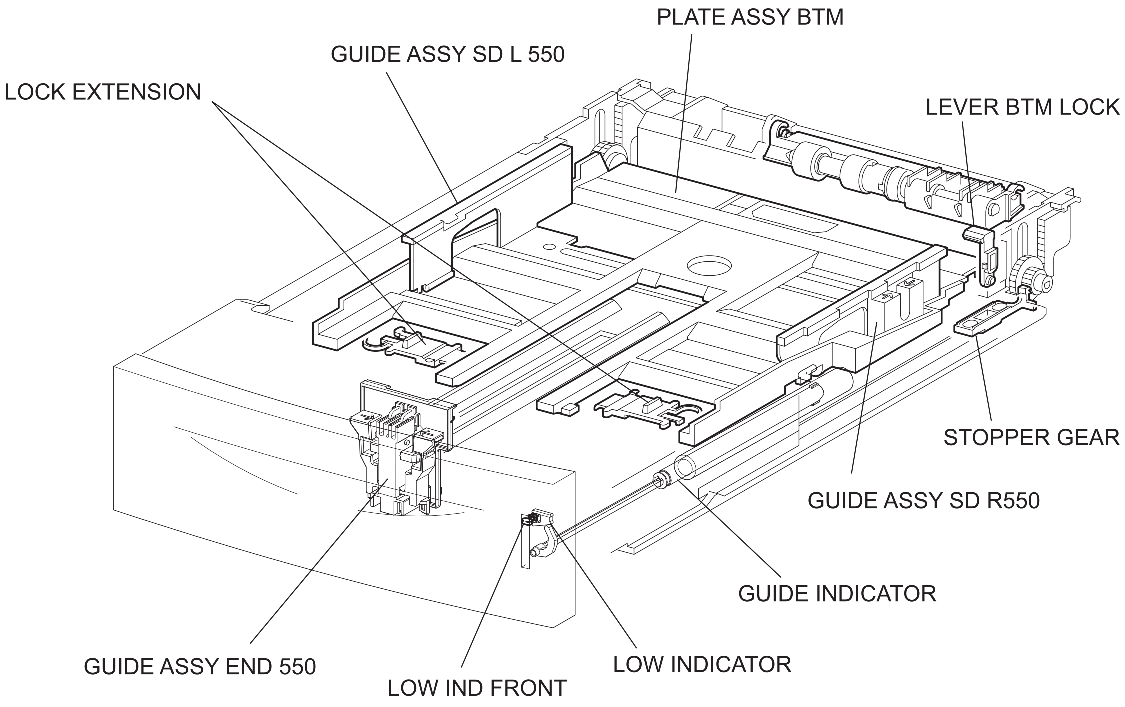


PLATE ASSY BTM
GUIDE ASSY SD L 550
LOCK EXTENSION
LEVER BTM LOCK
STOPPER GEAR
GUIDE ASSY SD R550
GUIDE INDICATOR
GUIDE ASSY END 550
LOW IND FRONT
LOW INDICATOR

J36017OA

6.10 Paper Feeder

Since the Tray1 and Tray2 are functionally equivalent in terms of the Size Switch, ACTUATOR NO PAPER, and NO PAPER SENSOR, only the components of one tray are described here.
Since the ACTUATOR LOW PAPER and PAPER LOW SENSOR are not installed in the Tray1, the description of these components applies to the Tray2 only.

6.10.0.1 150 FEEDER ASSY(Tray1) / 550 FEEDER ASSY(Tray2)

This is a mechanism for supplying paper from the Paper Cassette into the printer. The driving force from the MAIN MOTOR is transmitted via the CLUTCH ASSY PH to the ROLL ASSY FEED and ROLL ASSY NUDGER that are components of FEEDER ASSY. Thus, the paper is transported.
When the ROLL ASSY NUDGER picks up some sheets of paper and the paper gets low, the position of the ROLL ASSY NUDGER drops accordingly. The lowered ROLL ASSY NUDGER pushes down the lock lever of the PLATE ASSY BTM, releasing it. The PLATE ASSY BTM is pushed up by a spring, and thus the paper is raised. The raised paper then raises the SUPPORT NUDGER. The SUPPORT NUDGER disengages from the lock lever of the PLATE ASSY BTM. The PLATE ASSY BTM stops moving upward.

6.10.0.2 Size Switch

A switch for setting the size of paper supplied from each Paper Cassette is mounted. A signal indicating the set size is transmitted as a voltage to the HVPS/MCU.

6.10.0.3 ACTUATOR NO PAPER

If paper runs out in the Paper Cassette, the ACTUATOR NO PAPER drops and the flag of the ACTUATOR NO PAPER that shielded the detection portion of the SENSOR NO PAPEER moves off the detection portion. Thus, the light is transmitted.

6.10.0.4 NO PAPER SENSOR

The presence or absence of paper in the Paper Cassette is detected by the position of the ACTUATOR NO PAPER. This is converted into an electrical signal. If the detection portion is shielded (i.e., there is paper), /NO-PAPER 1/2 SNR ON signal is turned OFF.

6.10.0.5 SENSOR REGI

The paper transported from the Paper Cassette pushes up the ACTUATOR B. The flag of the ACTUATOR A optically unshields the detection portion of the SENSOR REGI. Thus, the passage of paper is detected.

6.10.0.6 CLUTCH REGI

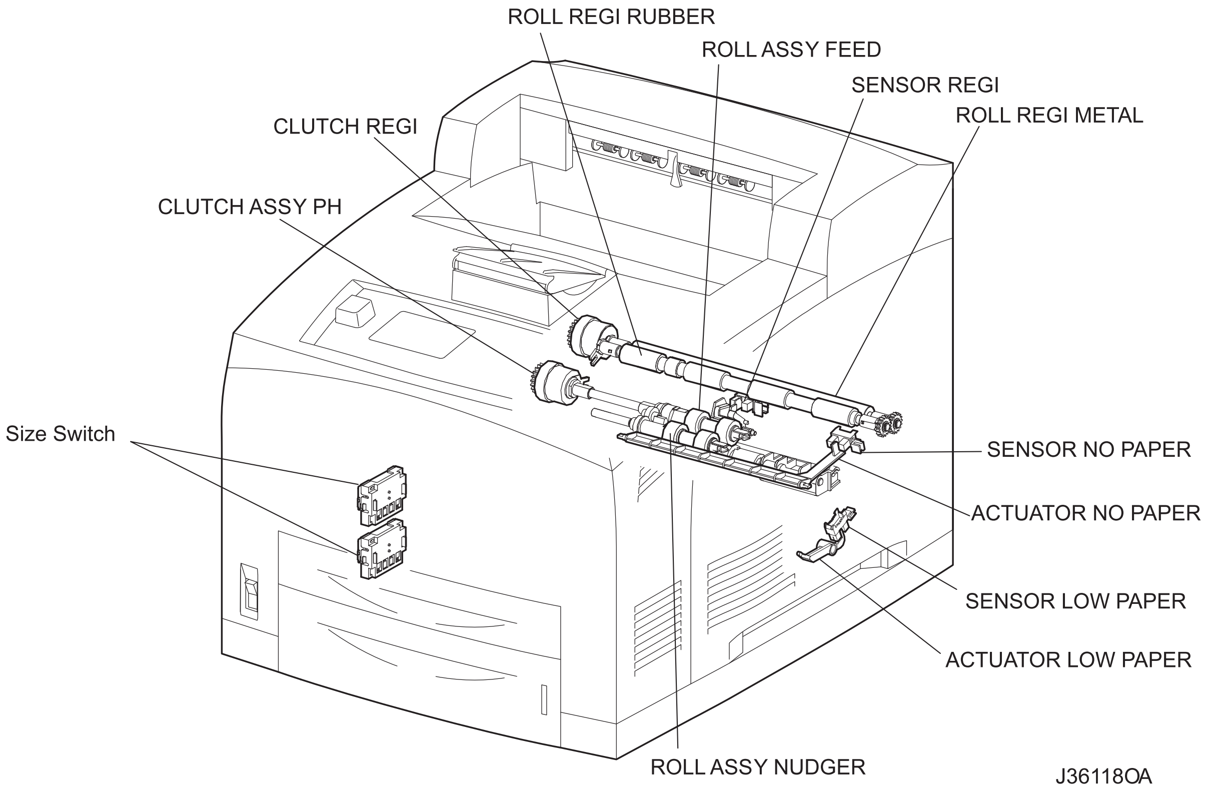
This electromagnetic clutch turns ON and OFF the driving force to the ROLL REGI RUBBER and ROLL REGI METAL, to place the paper in position.

6.10.0.7 ACTUATOR LOW PAPER

When paper is low in the Paper Cassette installed in the Tray2, the arm of the ACTUATOR LOW PAPER is pushed up by the PLATE ASSY BTM. The flag of the ACTUATOR LOW PAPER that shielded the detection portion of the PAPER LOW SENSOR moves off the detection portion. Thus, the light is transmitted.

6.10.0.8 PAPER LOW SENSOR

When paper is low in the Tray2 Paper Cassette, this is detected by the position of the ACTUATOR LOW PAPER and converted into an electrical signal. When the detection portion is shielded (i.e. paper is high), /LOW PAPER SNR ON signal is turned OFF.


ROLL REGI RUBBER
ROLL ASSY FEED
SENSOR REGI
ROLL REGI METAL
CLUTCH REGI
CLUTCH ASSY PH
Size Switch
SENSOR NO PAPER
ACTUATOR NO PAPER
SENSOR LOW PAPER
ACTUATOR LOW PAPER
ROLL ASSY NUDGER
J36118OA

6.11 Xero

6.11.1 EP CARTRIDGE

The EP CARTRIDGE is also known as CRU (Customer Replaceable Unit), and is made up of the following five components.

- Drum

  This is a cylinder of aluminum and coated with a photoconductive material. Because of this photoconductive coating layer, electric charges are retained on the surface in the dark, and electrical conduction occurs when exposed to light.
- BCR (Bias Charge Roll)

  This uniformly distributes electric charges over the drum surface, and erases a charge-reduced pattern remaining from the previous cycle.
- Magnet Roll

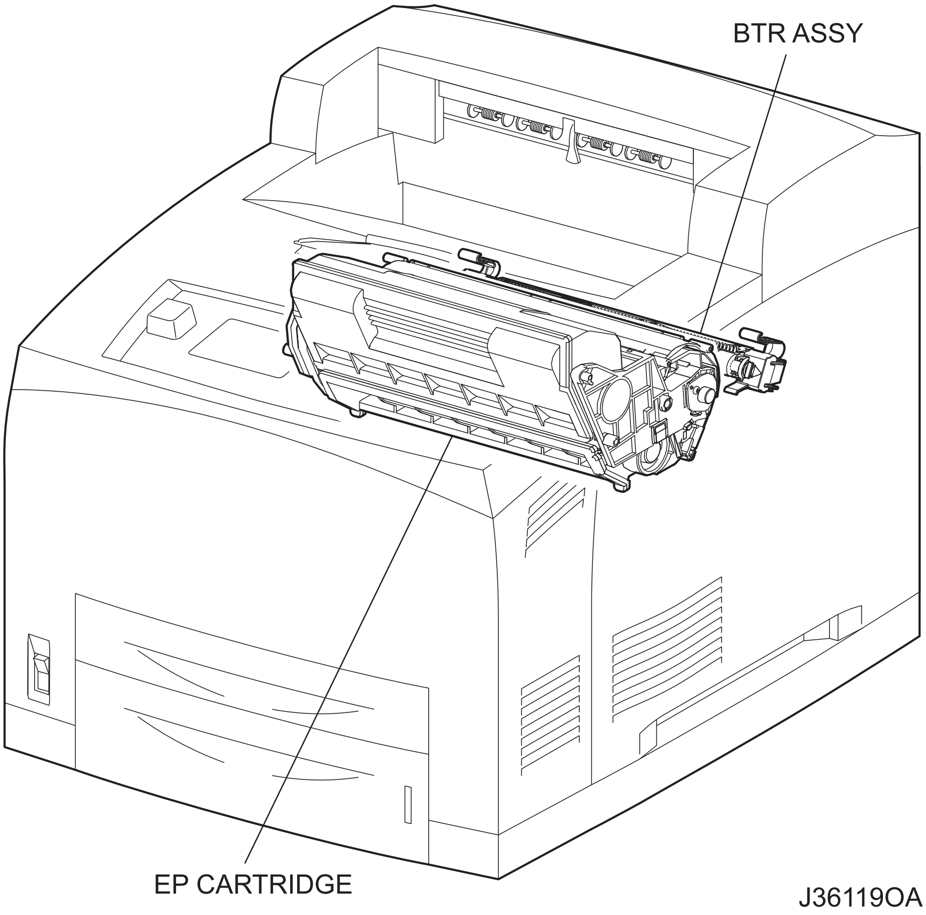
  This holds toner as a thin layer on the surface of this roll, and acts to transport the toner into the gap between the drum and Magnet Roll. The toner is supplied to the Magnet Roll by the Agitator in the Toner Compartment.
- CM Blade (Charging and Metering Blade)

  This spreads the toner into a thin layer over the Magnet Roll, and applies negative charges to the toner triboelectrically.
- Cleaning Blade

  This scrapes toner remaining after the transfer step off the drum surface.

6.11.2 BTR ASSY

The BTR of the BTR ASSY is in contact with the drum of the EP CARTRIDGE, and is driven by the Drum Gear. When the paper moves between the BTR and Drum, the BTR applies positive charges to the rear surface of the paper. The negatively charged toner image is attracted by positive charges on the rear surface of the paper. Thus, the image is transferred from the surface of the drum to the surface of the paper.



6.11.3 ROS ASSY

The ROS (Raster Output Scanner) scans the surface of the drum with a laser beam. The ROS ASSY consists of the following three components, i.e., LD (Laser Diode) Assembly, Scanner Assembly, and SOS PWB.

- LD Assembly

  The LD Assembly produces a laser beam. This beam is turned ON and OFF according to a print data signal.

- Scanner Assemblyy

  The Scanner Assembly consists of a Polygon Mirror (12 facets) and a Scanner Motor. The Polygon Mirror is mounted to the shaft of the Scanner Motor.

  The Scanner Motor rotates the Polygon Mirror at a specified speed. The rotating Polygon Mirror reflects the beam to the drum surface through lenses and mirrors, to scan the beam from one end to the other of the drum. One scan is made with one facet of the mirror.

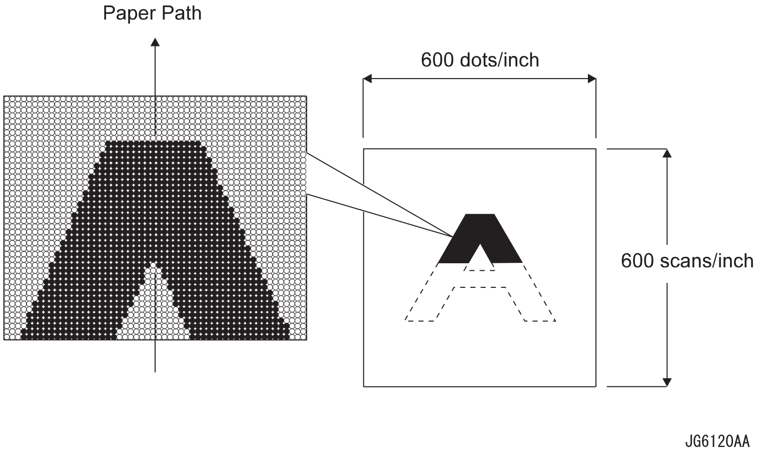
  The Scanner Motor is driven by three-phase, full-wave current linear drive. The current through the winding of each phase is switched by a Hall amplifier matrix. The signal from the phase detection terminal of the Motor is used.

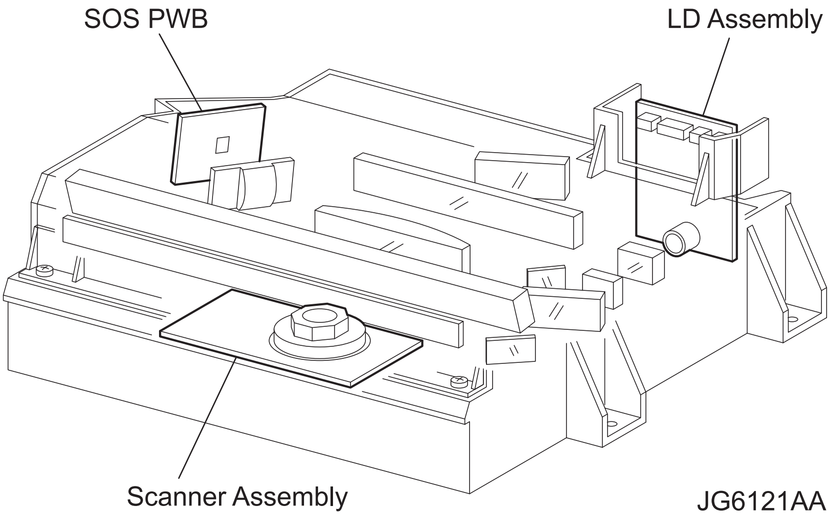
- SOS PWB

  When the laser beam hits the SOS Sensor of the SOS PWB, the beam is converted into an electrical signal (SOS signal), and the initial position where a scan is started on each line is detected.

When the laser beam is scanned across the drum surface from one end to the other while turning ON and OFF the beam, one line of latent image is created. If the scanning by the laser beam is repeated while rotating the drum, a two-dimensional image is created. The resolution in the scanning direction (from right to left) is determined by the rotational speed of the Scanner Motor and by the speed at which the laser is adjusted. The resolution in the process direction (from top to bottom) is determined by the rotational speed of the Scanner Motor. (If the scanning speed is increased, the next row to be scanned can be started earlier accordingly.)

Conceptual diagram of image creation by scanning





6.12 Fuser

6.12.0.1 Heat Roll

This is a hollow metal tube having a coated surface. This tube is heated by the inside Heater Rod. Heat is applied to the paper passing between this roll and the Pressure Roll. This heat fuses and fixes the toner on the paper.

6.12.0.2 Pressure Roll

This is a metal shaft coated with sponge rubber. Pressure is applied to the paper between this roll and the Heat Roll. This pressure presses the melted toner against the paper.

6.12.0.3 Heater Assembly

The Heater Assembly consists of a Heater Rod located in a Heat Roll and a harness connecting the Heater Rod to a terminal. The Heater Rod consists of heater coil inside a quartz glass and heats up the Heat Roll.

6.12.0.4 Temperature Sensor

This is a resistor (thermister) having a known value of resistance that sensitively varies with temperature. This sensor is mounted in contact with the surface of the Heat Roll, and monitors the temperature of the surface. The power supply of the Heater Rod is turned ON and OFF using the signal from this sensor, so that the surface temperature of the Heat Roll can be maintained within a specified range. This signal is also used to provide a first stage of overheat protection.

6.12.0.5 Thermostat Sensor (STS)

Two STS are installed. The STS are connected to the Heat Roll in series.

This provides a second stage of overheat protection. If the first stage does not prevent the Fuser from overheating, the Thermostat cuts off the power-supply circuit for the Heater Rod. The STS operates as follows.

(1) If the paper is set incorrectly, the Pressure Roll may melt and adhere. As a countermeasure against this, the power-supply circuit is cut off to cool down the roll, if the detected temperature gets higher than a preset temperature.

(2) If the temperatures increase at both sides of the Heat Roll, both ends of the paper may curl. As a countermeasure against this, the mode is switched to Short lamp lighting to control the temperature rise, if the detected temperature exceeds the preset temperature.

6.12.0.6 Heat Roll Fingers

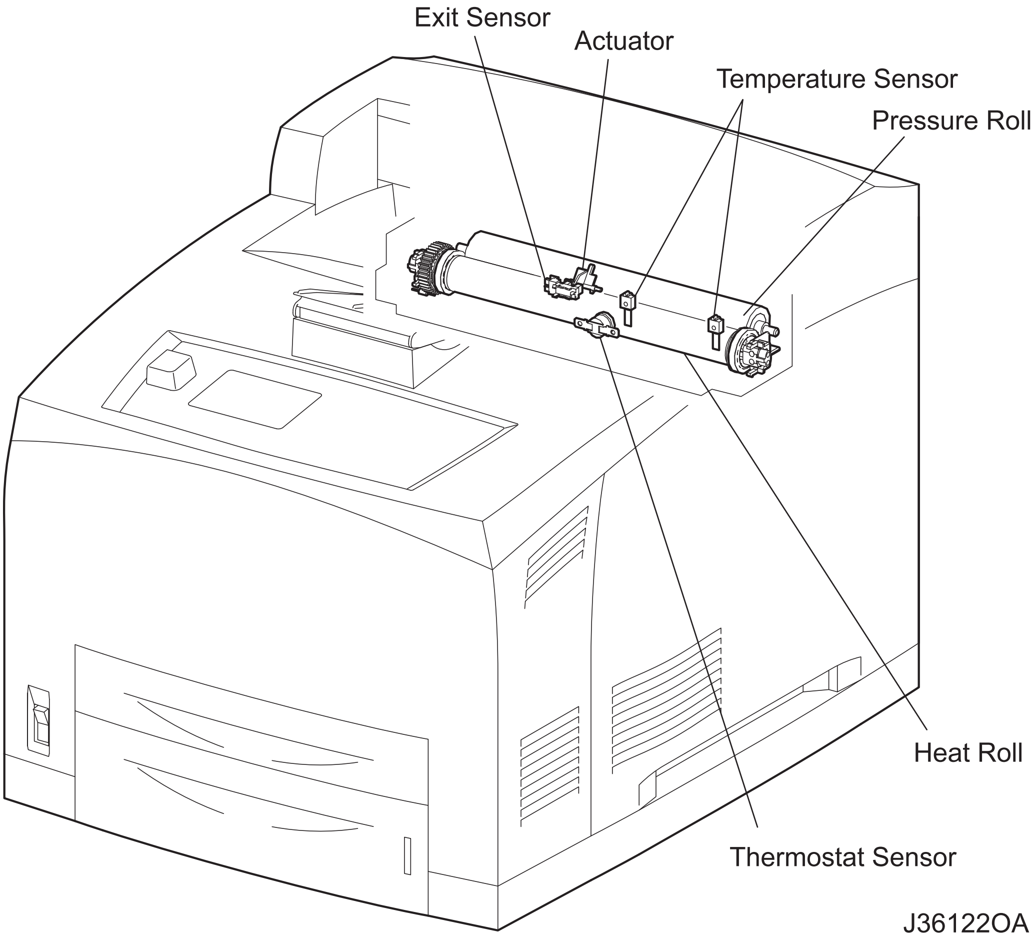
These fingers peel off the leading edge of the paper from the Heat Roll to prevent the paper from getting wound around the Heat Roll.

6.12.0.7 Heat Roll Diode

The negative charge accumulated on the Heat Roll may deteriorate the toner image on the paper during fixing. The Heat Roll Diode discharges the charge to the frame ground.

6.12.0.8 Exit Sensor

This sensor detects the arrival of the paper at a detection point in the exit area positioned behind the Fuser. This sensor also detects the discharge of the paper from this point. When the sensor receives light (i.e., paper is present), /EXIT goes Low.


Exit Sensor
Actuator
Temperature Sensor
Pressure Roll
Heat Roll
Thermostat Sensor
J36122OA

6.13 500 Paper Exit & Option Face Up Tray

500 Paper Exit is components for discharging the printed paper out of the printer. 500 Paper Exit enables Face-Up output to the Option Face Up Tormented on the rear surface of the machine), and output to Option OCT as well as Face-Down output.

6.13.0.1 MOTOR ASSY EXIT

This motor drives the ROLL EXIT that conveys paper to each output tray. If the optional DUPLEX is installed, this motor has also a function of reversing and inserting paper into the Duplex.

6.13.0.2 ROLL EXIT

This roll transports the printed paper sent out from the Fuser, to the Face-Down output tray.

6.13.0.3 ROLL FU

This roll discharges the printed paper sent out from the Fuser, to the Face-Up output tray.

6.13.0.4 SENSOR FACE UP OPEN

This sensor detects that the Face-Up print has been selected. If the LEVER GATE FU is raised, a signal is detected by the Actuator attached to the interlocking GATE FU, and the Face-Up print mode is set.

6.13.0.5 SENSOR FULL STACK

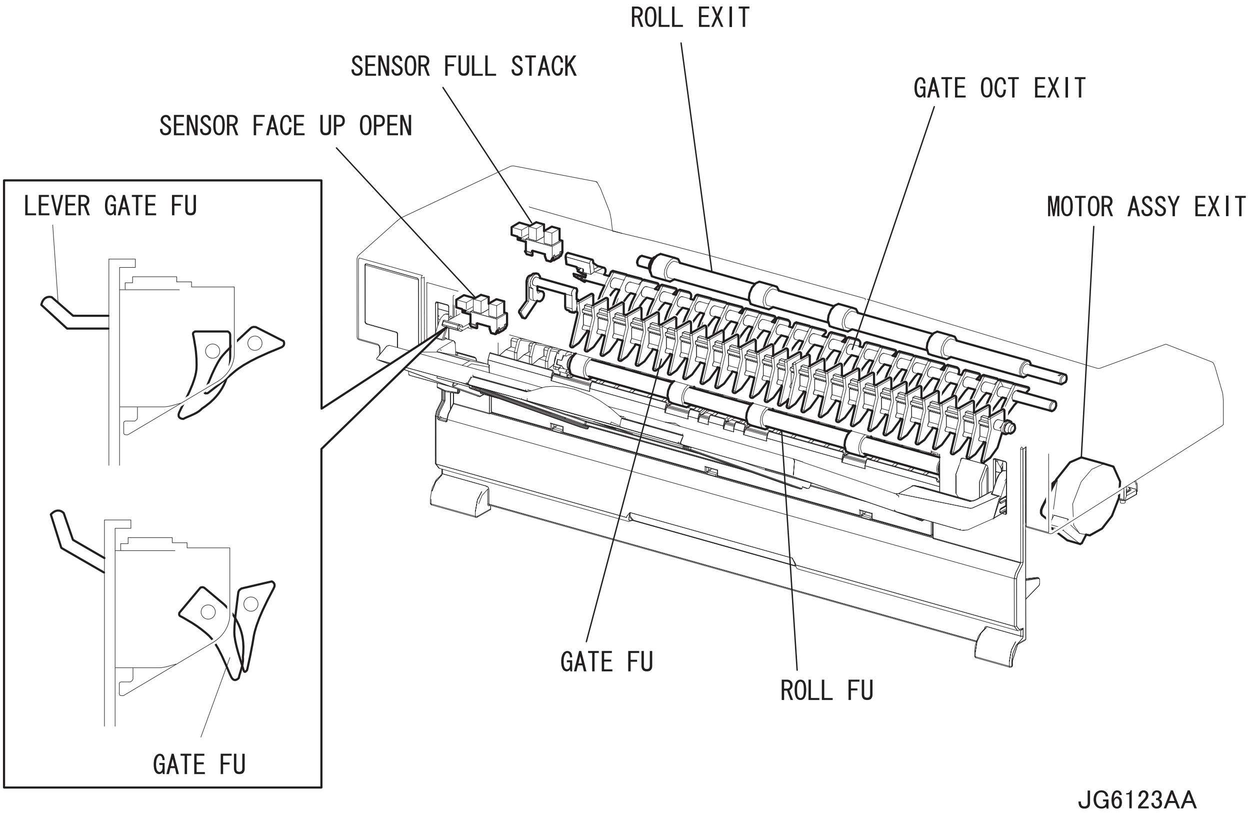
This sensor detects that the 500 Exit Face-Down output tray is full, using the ACTUATOR FULL STACK.

6.13.0.6 GATE FU

This gate switches the paper transport path interlocking with the LEVER GATE FU. When the LEVER GATE FU is raised, the GATE FU blocks the normal paper output path and switches the output direction to the Face-Up output tray.

6.13.0.7 GATE OCT EXIT

This gate switches the paper transport path interlocking with the LINK GATE OCT. When the SOLENOID ASSY GATE installed in the optional OCT operates, the LINK GATE OCT pushed down by the spindle of the SOLENOID ASSY GATE blocks the normal paper output path and switches the output direction to the OCT output tray.


ROLL EXIT
SENSOR FULL STACK
GATE OCT EXIT
SENSOR FACE UP OPEN
MOTOR ASSY EXIT
LEVER GATE FU
GATE FU
ROLL FU
GATE FU
JG6123AA

6.14 Drive

6.14.0.1 GEAR ASSY HOUSING

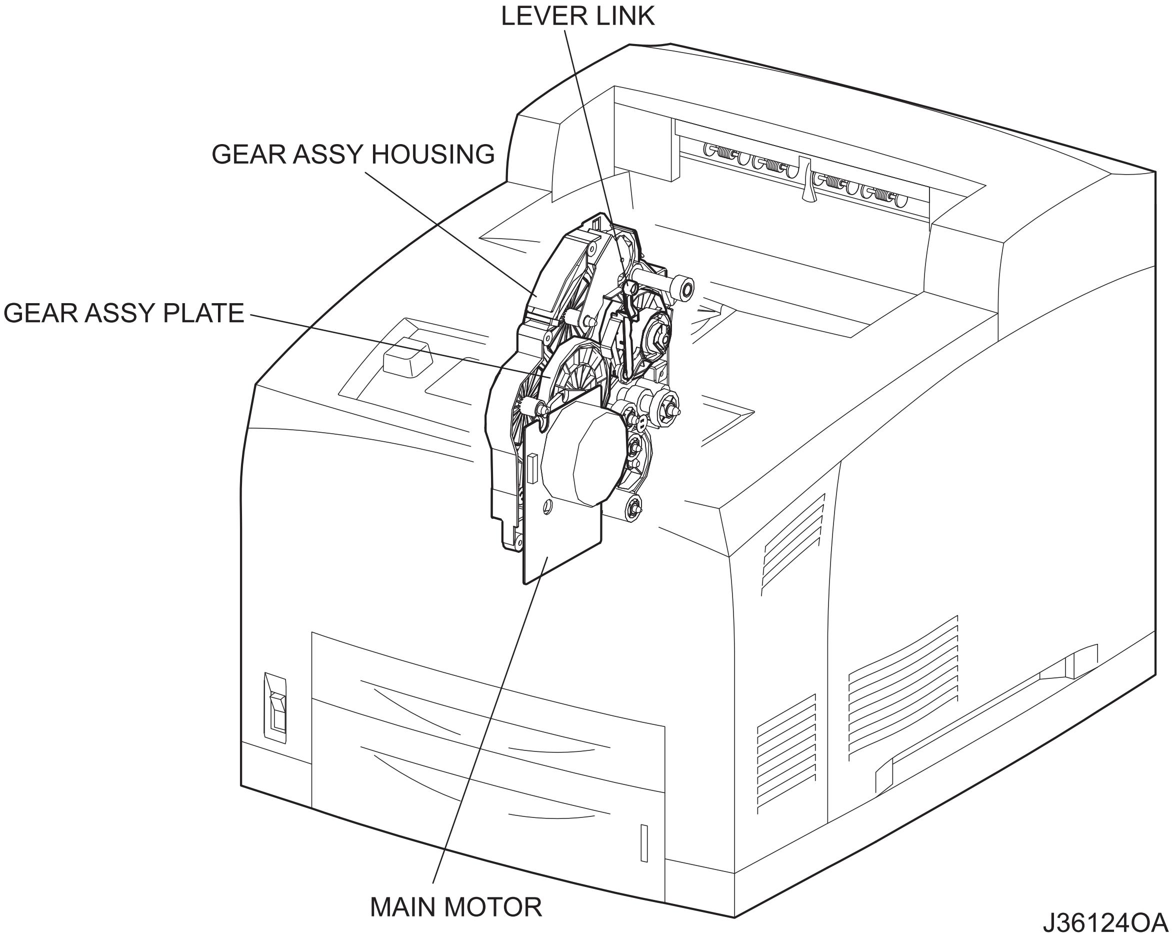
This housing is composed of gears for transmitting power from the MAIN MOTOR that drives the printer body to various portions of the printer.

6.14.0.2 GEAR ASSY PLATE

This transmits power from the MAIN MOTOR to the EP CARTRIDGE.

6.14.0.3 LEVER LINK

This connects and disconnects the power from the MAIN MOTOR to the FUSER ASSY. When the COVER OPEN is opened, the LEVER LINK pushes up the Gear 8 in the GEAR ASSY HOUSING, and disconnects the GEAR 9. Thus, the power path to the FUSER ASSY is disconnected. As the LEVER LINK moves up and down, the Gear 4 in the GEAR ASSY PLATE moves right and left via the LINK GEAR 3, and power to the Drum of the EP CARTRIDGE is connected or disconnected.


LEVER LINK
GEAR ASSY HOUSING
GEAR ASSY PLATE
MAIN MOTOR
J36124OA

6.15 Electrical

6.15.0.1 INTERLOCK S/W 24V

This safety switch cuts off a 24 VDC power supply from the LVPS to the HVPS/MCU and MAIN MOTOR when the COVER OPEN is open.

6.15.0.2 INTERLOCK S/W 5V

This safety switch cuts off a 5 VDC power supply from the LVPS to the LD Assembly of the ROS ASSY when the COVER OPEN is open.

6.15.0.3 INTERLOCK S/W REAR

This safety switch interrupts a 24 VDC power supply from the LVPS to the HVPS/MCU and MAIN MOTOR when the COVER REAR is open.

6.15.0.4 FAN MAIN

This vents air inside the printer to prevent an excessive rise in the inside temperature.

6.15.0.5 FAN SUB

This fan takes outside air into the printer to prevent an excessive rise in the inside temperature. This is mounted on the ROS ASSY in the center on the front side.

6.15.0.6 LVPS

This generates low DC voltages (5 V and 3 V for Logical Circuit, 5 V for Laser Diode, and 24 V for Motor and Clutch) from the AC power.

6.15.0.7 HVPS/MCU

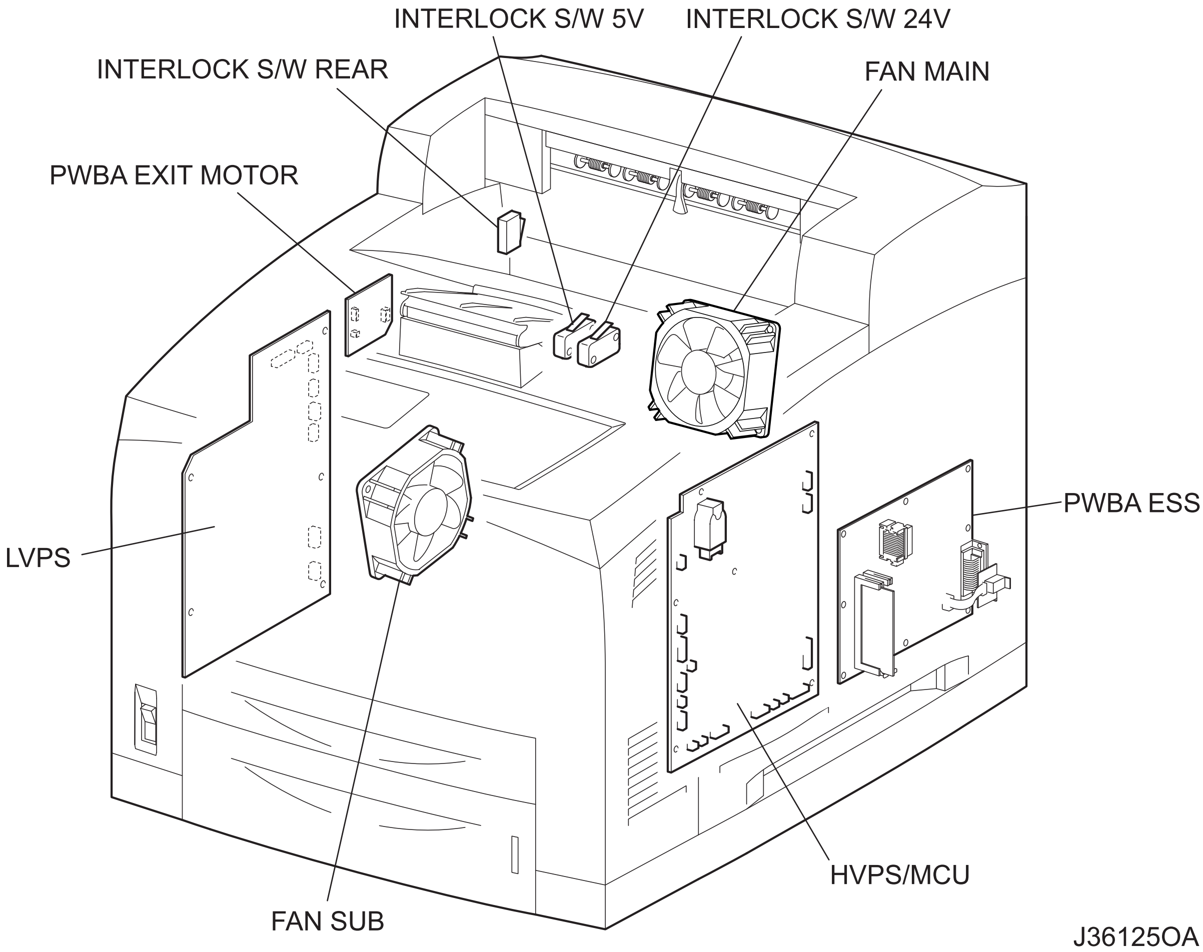
The functions of the HVPS and MCU are incorporated in this substrate. The HVPS generates high AC and DC voltages and supplies them to the BCR (charging), Magnet Roll (development), BTR (transfer), and Detack Saw (peeling). The MCU controls the printing operation according to the information obtained through communications with the Print Controller and from sensors and switches.

6.15.0.8 PWBA ESS

This receives data from the Host Computer, performs printing, and controls the whole printer.

6.15.0.9 PWBA EXIT MOTOR

This controls the MOTOR ASSY EXIT according to a signal from the HVPS/MCU.


INTERLOCK S/W 5V
INTERLOCK S/W 24V
INTERLOCK S/W REAR
FAN MAIN
PWBA EXIT MOTOR
PWBA ESS
LVPS
HVPS/MCU
FAN SUB
J36125OA

6.16 Control

6.16.1 Control of Paper Size

6.16.1.1 Cassette Feeding (Paper Cassette)

The following table gives the states (ON(1) or OFF (0)) of the switches in the Size Switch, corresponding to the paper sizes of the Paper Cassette.

NOTE

The switches in the Size Switch are denoted by “SW1”, “SW2”, “SW3”, and “SW4”, respectively, from the front side.

Paper size	Size Switch			
	SW1	SW2	SW3	SW4
No cassette	0	0	0	0
Executive SEF	0	0	0	1
B5(JIS) SEF	0	0	1	1
A5 SEF	0	1	0	1
Legal14”SEF	0	1	1	1
Letter SEF	1	0	0	1
A4 SEF	1	1	0	1
Legal13”SEF	1	1	1	1

6.17 ROS Control

6.17.1 Rotation of Scanner Motor

The control (ON/OFF) of the rotation of the Scanner Motor is performed as shown below according to the mode of operation.

Mode of operation	ON/OFF of rotation of Scanner Motor
Standby state	Kept OFF.
Printing state	Turned on by receiving signal from the Controller, and turned off after 10 s since end of printing.
Power-saving state	Kept OFF.

The following table gives the resolution that differs according to the specifications of the machine, and the corresponding rotational speeds of the Scanner Motor.

Process Speed	Resolution	RPM of Scanner	CLK signal frequency
40/45ppm 269mm/s	600 dpi	31,772 rpm	3,177.2 Hz
	1200 dpi	31,772 rpm	3,177.2 Hz
50ppm 299mm/s	600 dpi	35,314 rpm	3,531.4 Hz
	1200 dpi	35,314 rpm	3,531.4 Hz

dpi (dot per inch)
rpm (revolutions per minute)

Reference ***Each facet of the Polygon Mirror (***12 facets***) is scanned with a laser beam.***

6.17.2 Warm-up of ROS

The Scanner Motor rotates simultaneously with the warm-up of the ROS. The SOS signal is sampled at intervals of 100 ms. If the obtained value is shorter than the Ready reference value three consecutive times, the warm-up of the ROS is ended (The Scanner Motor is rotating at a constant speed).

6.17.3 ROS Reference Value

ROS reference value	Description
Ready reference value	SOS signal interval corresponding to less than 98% of the specified rotational speed of the Scanner Motor
Fail reference value	SOS signal interval corresponding to less than 90% of the specified rotational speed of the Scanner Motor

Reference ***If the speed of the Scanner Motor increases by more than 1%, the laser beam does not enter the SOS Sensor, and "U2" is detected in terms of Fail reference value.***

6.18 Fuser Control

6.18.1 Fuser Control

The Halogen Lamp is controllably turned ON and OFF, based on the Fuser control temperature.
At the start of warm-up and when the MAIN MOTOR is at rest, the standby temperature is taken as the Fuser control temperature. When the MAIN MOTOR is operating except at warm-up, the running temperature is taken as the Fuser control temperature.

6.18.2 ON/OFF Control of Halogen Lamp

The Halogen Lamp is controllably turned ON and OFF to maintain the Fuser control temperature.

6.18.3 Warm-up of Fuser

The Halogen Lamp is lit up (turned ON) simultaneously with the start of warm-up of the Fuser. When the temperature of the HEAT ROLL surface (detected temperature of THERMISTER) reaches the Fuser control temperature (standby temperature), the warm-up of the Fuser is ended.
During warm-up of the Fuser, the MAIN MOTOR is in operation.

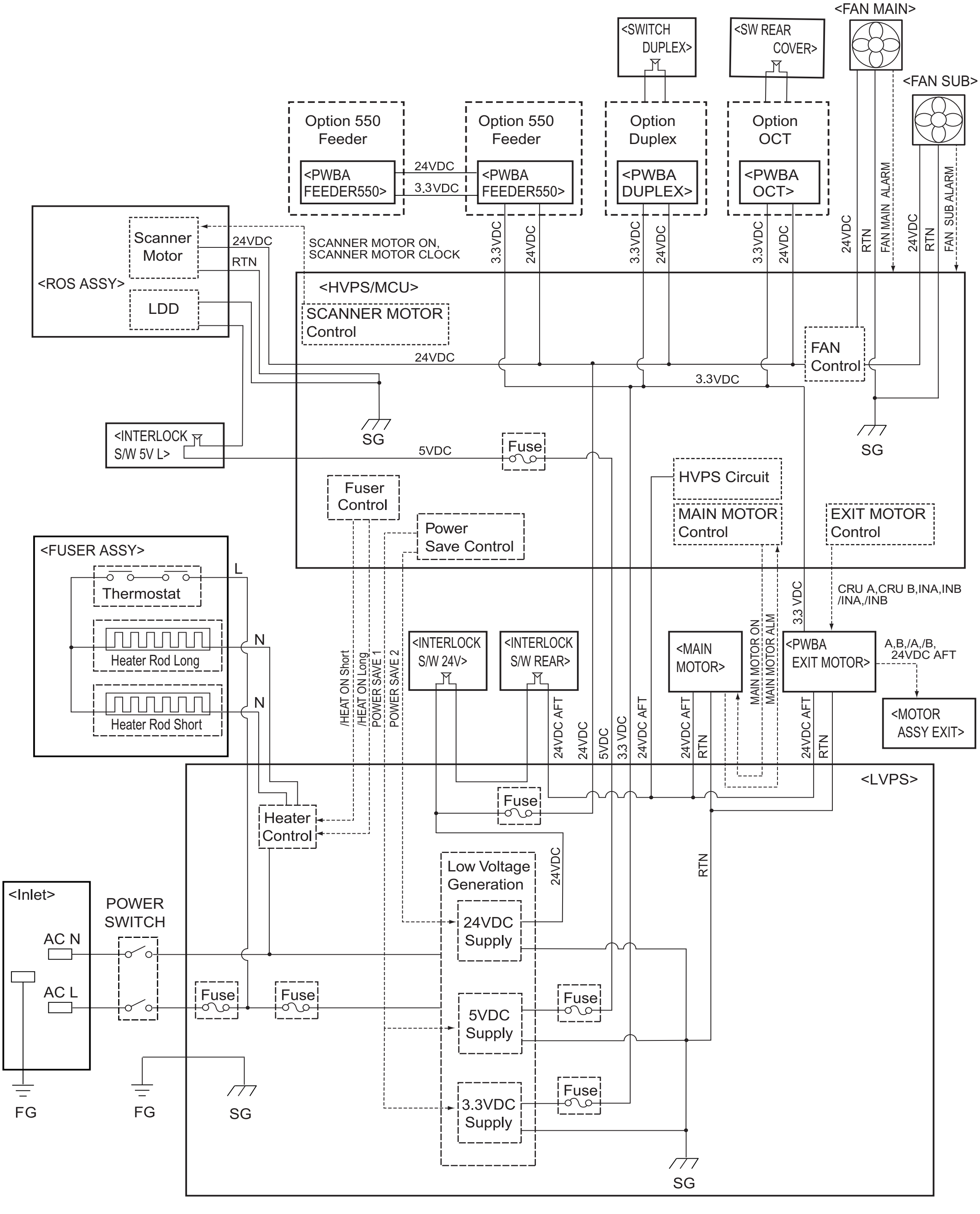
6.18.4 Fuser Temperature in Ready State

180 to 185°C in Ready (standby) state (During operation, it is higher than 185°C.)

6.18.5 Fuser Temperature when Abnormal Temperature (higher or lower) is Detected

Higher temperature: 250°C
Lower temperature: 130°C

6.19 Schematic Diagram of Safety System


<FAN MAIN>
<FAN SUB>
<SWITCH DUPLEX>
<SW REAR COVER>
Option 550 Feeder
<PWBA FEEDER550>
Option 550 Feeder
<PWBA FEEDER550>
Option Duplex
<PWBA DUPLEX>
Option OCT
<PWBA OCT>
24VDC
3.3VDC
RTN
FAN MAIN ALARM
FAN SUB ALARM
Scanner Motor
<ROS ASSY>
LDD
SCANNER MOTOR ON, SCANNER MOTOR CLOCK
<HVPS/MCU>
SCANNER MOTOR Control
FAN Control
SG
<INTERLOCK S/W 5V L>
5VDC
Fuse
HVPS Circuit
Fuser Control
Power Save Control
MAIN MOTOR Control
EXIT MOTOR Control
<FUSER ASSY>
Thermostat
Heater Rod Long
Heater Rod Short
L
N
CRU A,CRU B,INA,INB /INA,/INB
/HEAT ON Short
/HEAT ON Long
POWER SAVE 1
POWER SAVE 2
<INTERLOCK S/W 24V>
<INTERLOCK S/W REAR>
<MAIN MOTOR>
MAIN MOTOR ON
MAIN MOTOR ALM
3.3 VDC
<PWBA EXIT MOTOR>
A,B,/A,/B, 24VDC AFT
<MOTOR ASSY EXIT>
24VDC AFT
24VDC
5VDC
3.3 VDC
<LVPS>
Heater Control
Low Voltage Generation
24VDC Supply
5VDC Supply
3.3VDC Supply
<Inlet>
AC N
AC L
POWER SWITCH
FG
FG
SG
SG

J26126AA

7. Removal and Replacement Procedures

Parts removal and replacement procedures are described in major 9 items which correspond to classification of parts list.

RRP1	”Cover
RRP2	”150 Paper Cassette
RRP3	”Blank
RRP4	”550 Paper Cassette
RRP5	”150 paper Feeder
RRP6	”Blank
RRP7	”550 Paper Feeder
RRP8	”Xero
RRP9	”Blank
RRP10	”500 Paper Exit & Option Face Up Tray
RRP11	”Frame & Drive
RRP12	”Electrical

NOTE **Parts are controlled as spare parts. When servicing for parts for which no procedures are described, observe their assembling condition before starting the service.**

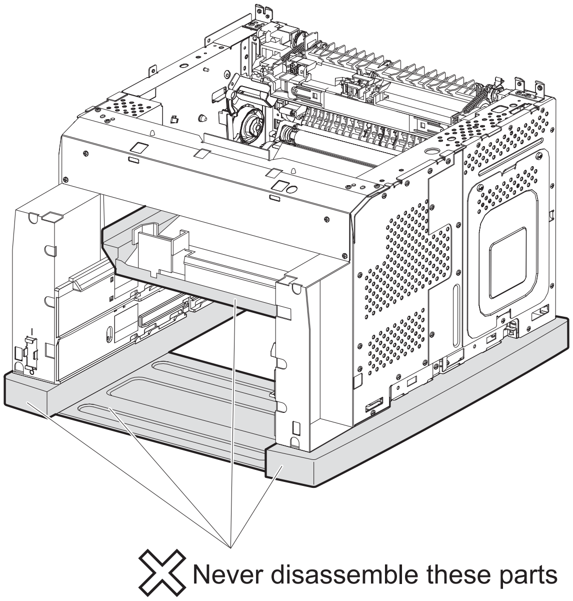
NOTE **Though the optional parts are assumed to be removed, they may not be removed if not required for the purpose of service operation.**

7.1 Before starting service work

- Turn the power OFF and remove the power cord from the electric outlet.
- When performing service operation for parts around the FUSER ASSY, start the service after the FUSER ASSY and parts around it have cooled down.
- Do not give forcible power to prevent damage of parts or functions.
- Since a wide variety of screws are used, be careful not to mistake their positions, to prevent crushing of the screw holes or other troubles.
- Wear a wrist band or the like as far as possible to remove static electricity of the human body.
- Remove the 150 Paper Cassette, 550 Paper Cassette and EP CARTRIDGE, and place them where the service is not disturbed.

7.2 Prohibited matter

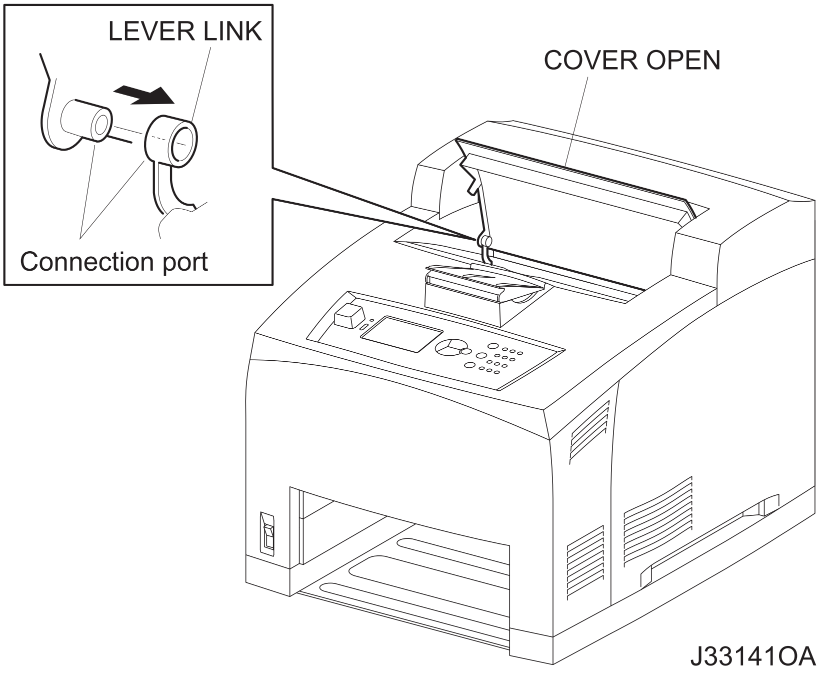
Do not remove the frame components shown in the figure below. Removing any of these components will make the laser printer go out of alignment. If the frame components are removed or their screws loosened by mistake, be sure to replace them again on a stable and firm horizontal work surface.



JG3172AA

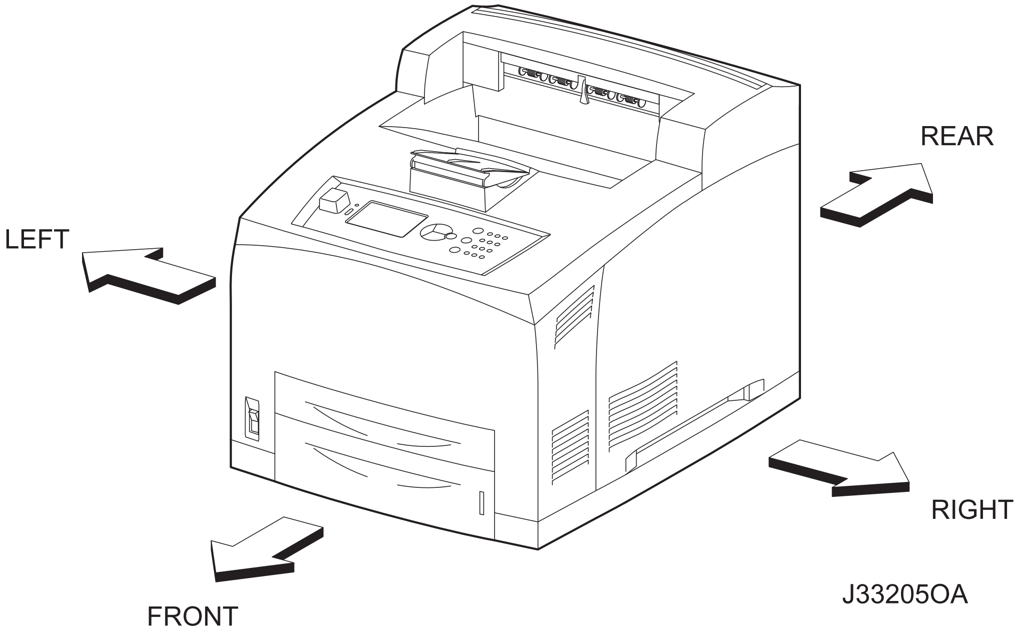
7.3 Confirmation after service

After a service, confirm that the COVER OPEN and the LEVER LINK are connected properly, and confirm the operation of the COVER OPEN by opening and closing it.


LEVER LINK
Connection port
COVER OPEN
J33141OA

7.4 Description of procedures

- “RRP X,Y “AAAAA” at the top of procedures represent the part name AAAAA are to be removed and replaced.
- “(PL X.Y.Z)” following the parts name in procedures represent that the parts are those of the plate (PL) “X.Y”, item “Z” in Chapter 5, Parts List. Their forms, replacing position or other conditions can be seen in Chapter 5, Parts List.
- In the procedures, directions are represented as follows.
  - Front: Front when you are facing the front of this laser printer.
  - Rear: Inner direction when you are facing the front of this laser printer.
  - Left: Left hand when you are facing the front of this laser printer.
  - Right: Right hand when you are facing the front of this laser printer.

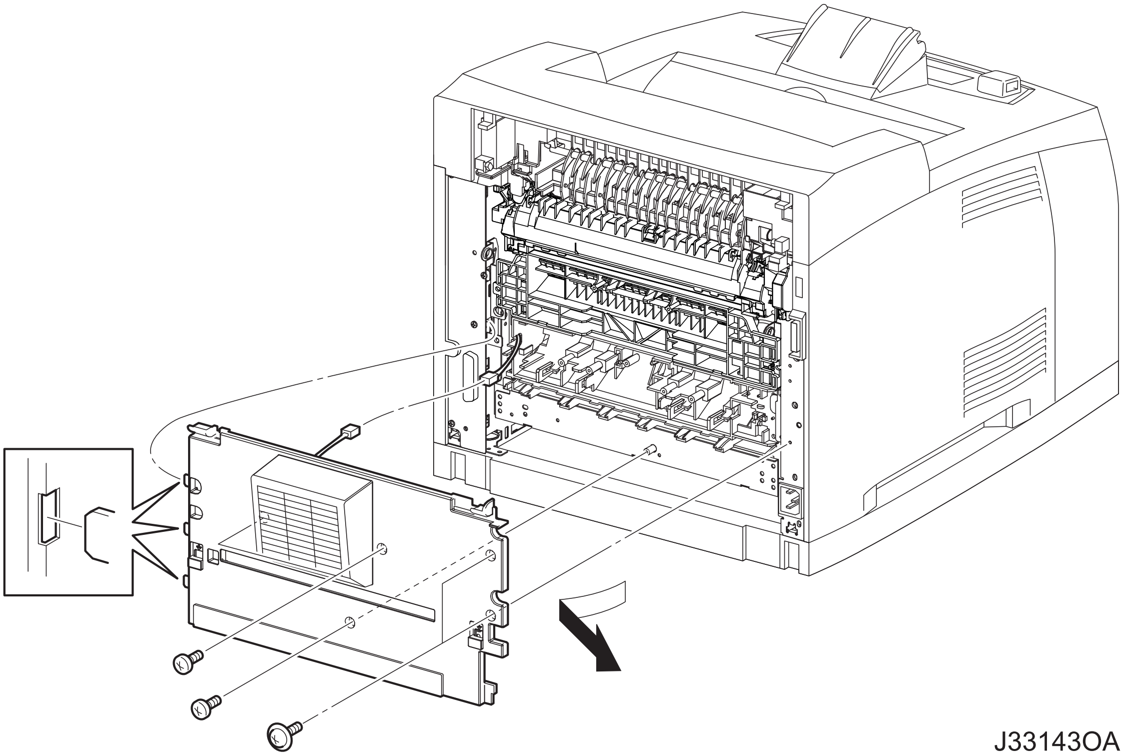


- The screws in procedures are expressed with their replacing position, color, characteristics and nominal length, etc.
- “In case of _____ specifications" in the procedures indicate that service operation should be provided only to laser printer of specified specifications (service operation should not be provided for laser printer of specifications not covered).
- “RRP X.Y” in the midst or at the end of sentences in the procedures indicate that work procedures related with the “RRP X.Y” are described.
- “Figure X.Y” at the end of the sentences of procedures indicate that illustrations instructive for the “RRP X.Y” are included.
- “Z)” in the illustrations correspond to “Z)” of the service procedures.
- The screws in the illustrations should be removed using a plus (+) screwdriver unless otherwise specified.

- A black arrow in the illustrations indicate movement in the arrow mark direction. Numbered black arrows indicate movement in the order of the numbers.
- White arrows (FRONT) in the illustrations indicate the front direction.
- For the positions of the connectors (P/J), refer to Chapter 7, Electric wiring.

RRP1. Cover

RRP1.1 COVER REAR (PL1.1.3)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the 5 screws (silver with flange, 8mm x 2, gold tapping, 8mm x 3) securing the COVER REAR to the printer.
3) Open the COVER REAR in the direction of the arrow. Release the 3 hooks securing the COVER REAR to the printer, and remove it from the printer.
4) Disconnect the connector (P/J244).

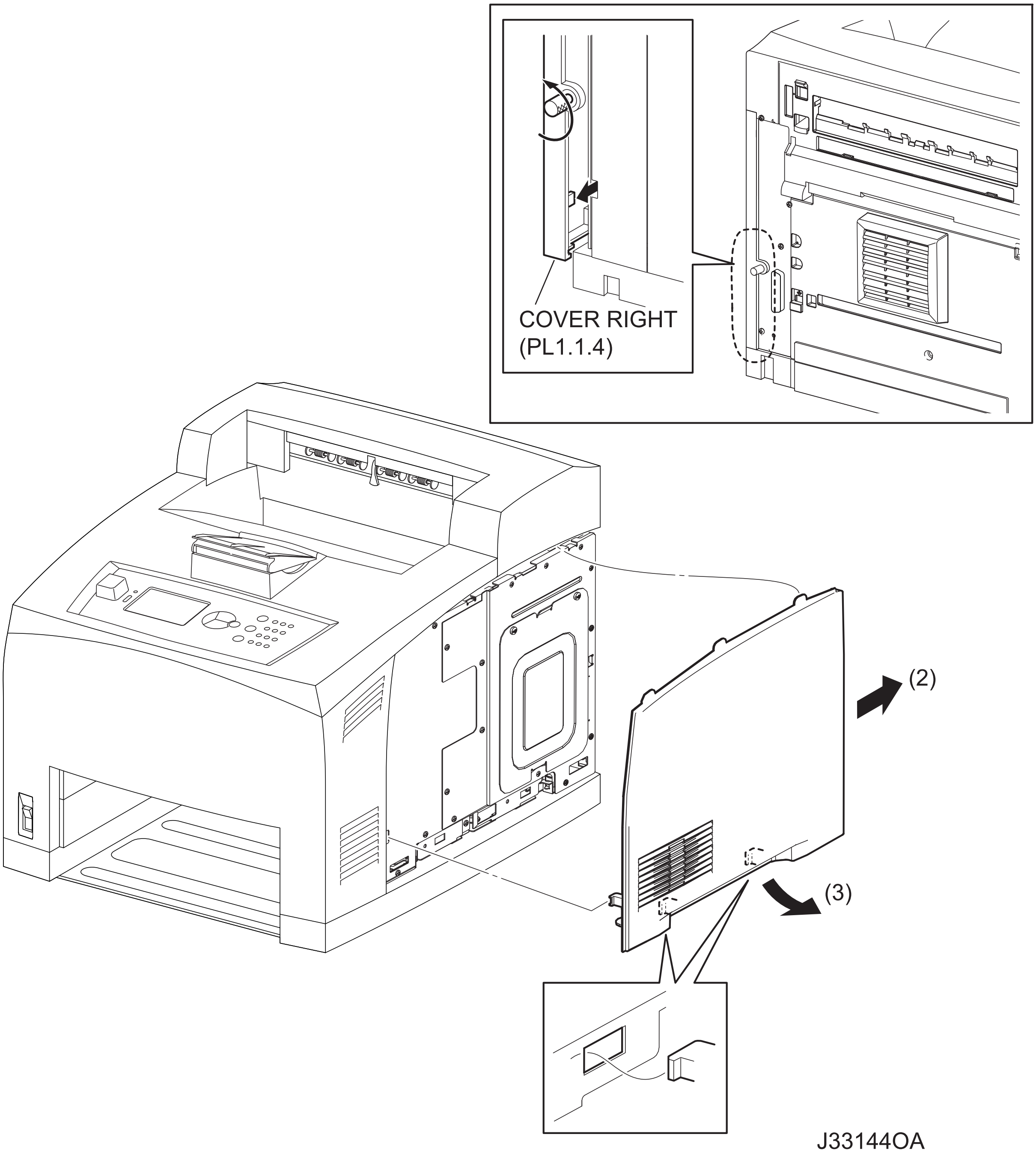
Replacement

1) Connect the connector (P/J244).
2) Insert the 3 hooks on the left side of the COVER REAR into the 3 holes of the printer.
3) Secure the COVER REAR to the printer using the 5 screws (silver with flange, 8mm x 2, gold tapping, 8mm x 3).

NOTE **There are 2 kinds of screws, make sure they are put in the right place. When tightening the screws be careful not to pinch the harness between the cover body and frame.**

4) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP1.2 COVER RIGHT (PL1.1.4)



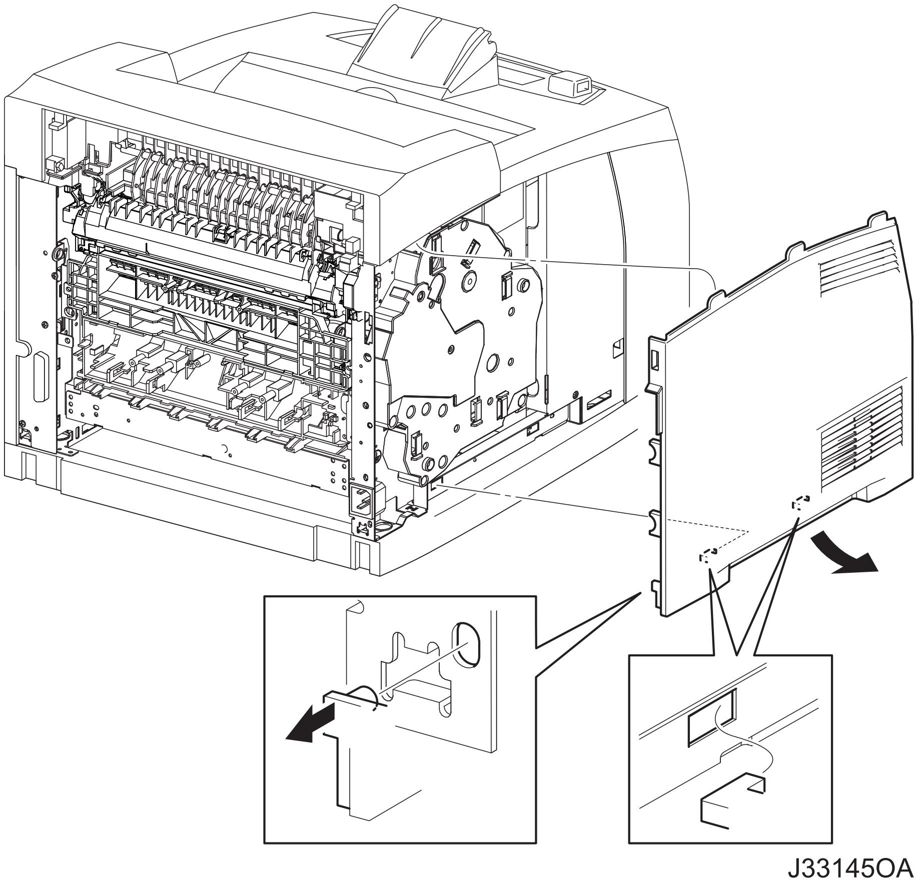
Removal

1) Loosen the screw securing the COVER RIGHT to the rear side of the printer.
2) Shift the COVER RIGHT in the direction of the arrow to release the 4 hooks, two below, one in front and one on rear, securing the COVER RIGHT to the printer.
3) Shift the COVER RIGHT downward to release the 3 hooks securing the top of it, and remove the COVER RIGHT from the printer.

Replacement

1) Shift the COVER RIGHT upward to lock the 3 hooks to the printer.
2) Shift the COVER RIGHT frontward to secure the 4 hooks, two below, one in front and one on rear, to the printer.
3) Secure the COVER RIGHT to the printer using the screw on the rear side of the printer.

RRP1.3 COVER LEFT (PL1.1.6)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Shift the COVER LEFT in the direction of the arrow to release the 4 hooks, two below and two on rear, securing the COVER LEFT to the printer.
4) Shift the COVER LEFT downward to release the 3 hooks securing the top of it, and remove the COVER LEFT from the printer.

Replacement

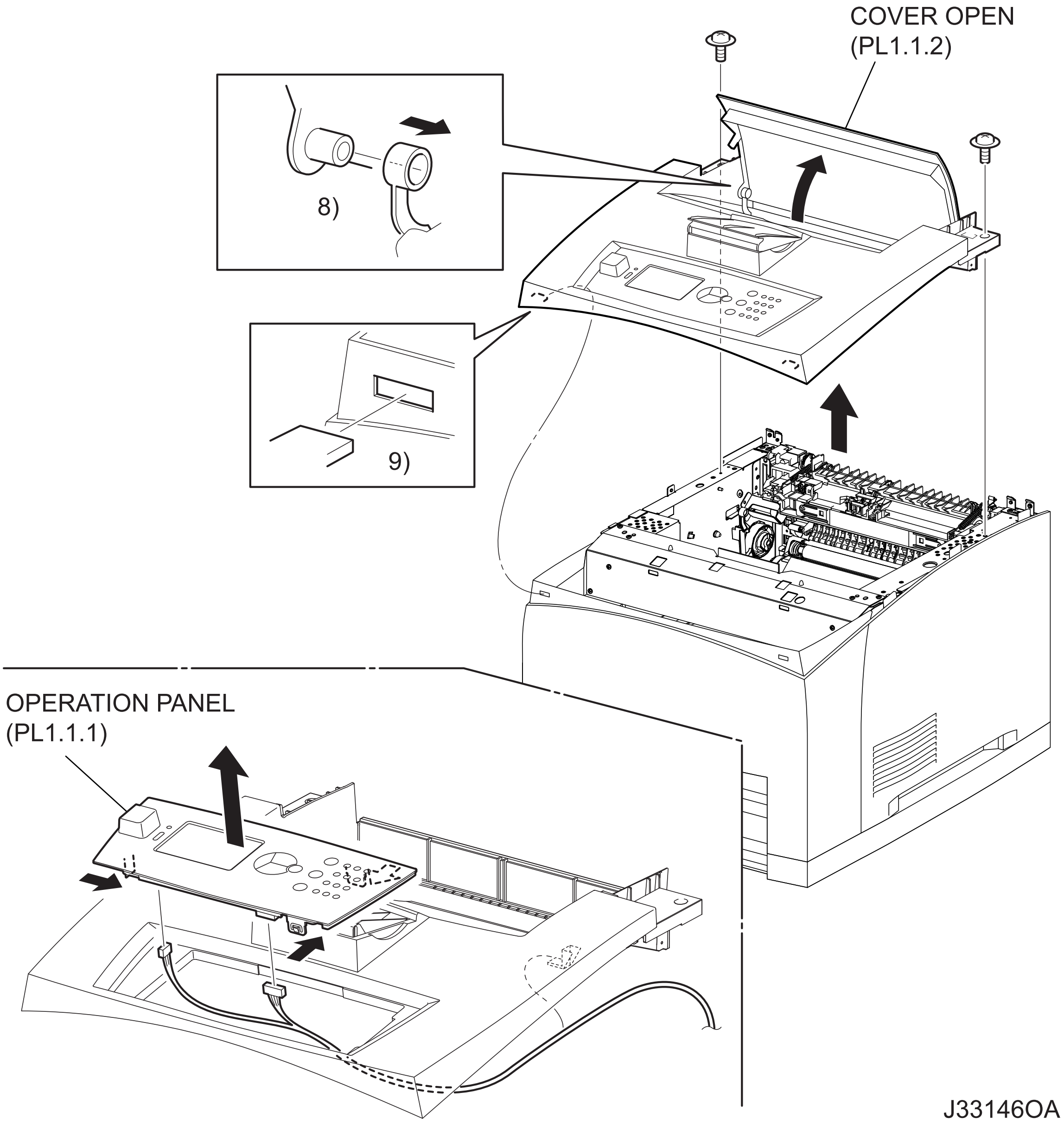
1) Shift the COVER LEFT upward to lock the 3 hooks to the printer.
2) Shift the COVER LEFT frontward to lock the 4 hooks, two below and two on rear, to the printer.
3) Install the COVER REAR (PL1.1.3) (RRP1.1)

NOTE

There are 2 kinds of screws, make sure they are put in the right place.

4) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP1.4 COVER TOP (PL1.1.7), OPERATION PANEL (PL1.1.1)


COVER OPEN
(PL1.1.2)
8)
9)
OPERATION PANEL
(PL1.1.1)
J33146OA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (PPR1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)

7) Remove the 2 screws (silver with flange, 8mm) securing the COVER TOP to the printer.
8) Remove the LEVER LINK (PL8.1.29) from the boss of the COVER OPEN (PL1.1.2).

NOTE **When removing the LEVER LINK from the boss of the COVER OPEN, the COVER OPEN is opened, and the LEVER LINK is extended.**

NOTE **In the following steps, do not separate the COVER TOP and the printer too far from the printer, since the OPERATION PANEL (PL1.1.1) attached to the COVER TOP is connected to the printer.**

9) Release the 2 hooks securing the front of the COVER TOP to the COVER FRONT (PL1.1.5), and pull out the COVER TOP slightly away from the printer.
10) Disconnect the two connectors (P/J2 and P/J3) of the OPERATION PANEL.
11) Release the HARNESS ASSY PANEL (PL1.1.10) from the hooks of the COVER TOP.
12) Remove the COVER TOP.
13) Release the 3 hooks securing the OPERATION PANEL to the COVER TOP, and remove the OPERATION PANEL.

Replacement

1) Install the OPERATION PANEL to the COVER TOP, and secure it using the 3 hooks.
2) Connect the two connectors (P/J2 and P/J3) of the OPERATION PANEL.
3) Route the HARNESS ASSY PANEL (PL1.1.10) through the hooks of the COVER TOP.
4) Install the COVER TOP to the printer, and secure it to the COVER FRONT (PL1.1.5) using the 2 hooks at the front of the COVER TOP.
5) Put the boss of the COVER OPEN (PL1.1.2) into the hole of the LEVER LINK (PL8.1.29).

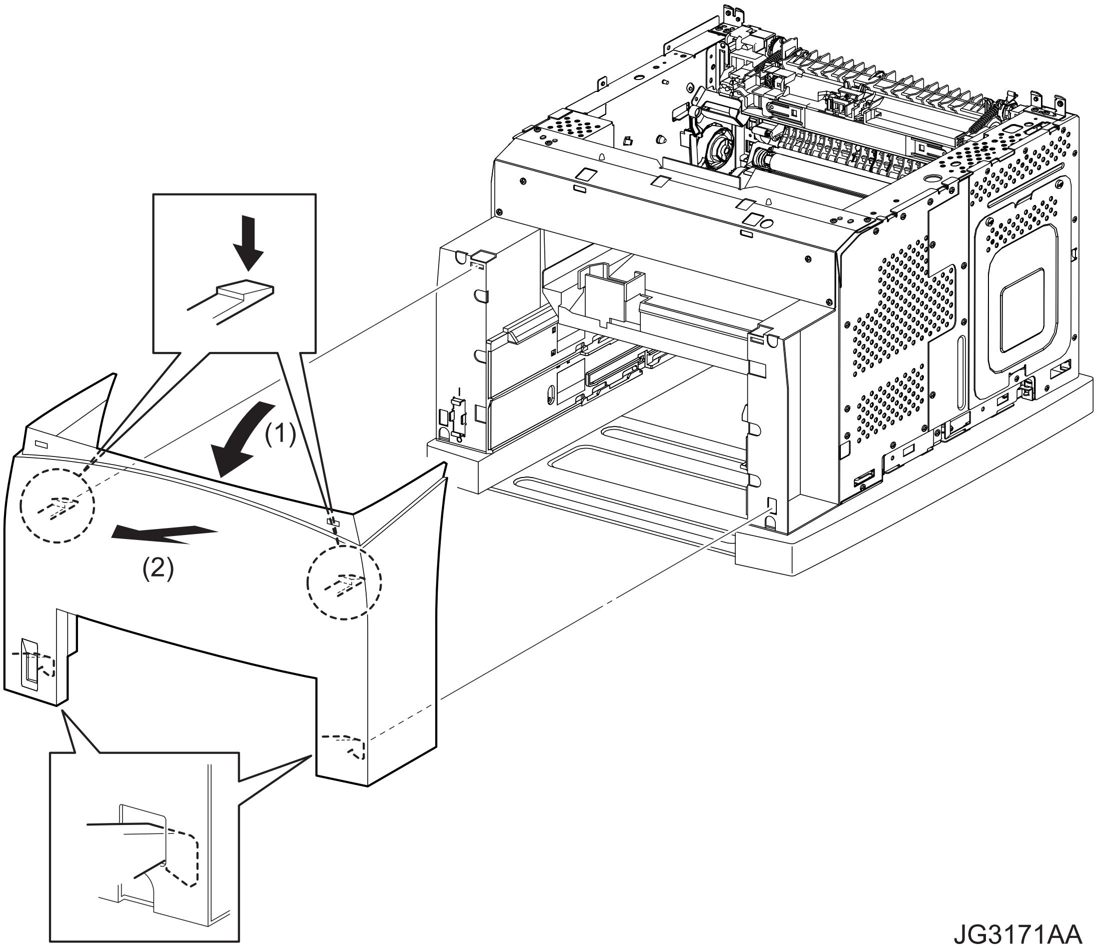
NOTE **When putting the boss of the COVER OPEN into the hole of the LEVER LINK, the COVER OPEN should be opened, and the LEVER LINK should be extended.**

6) Secure the COVER TOP to the printer using the 2 screws (silver with flange, 8mm).
7) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)

NOTE **When installing, put the harnesses of the MOTOR ASSY EXIT and HARNESS ASSY EXIT SNR1 into the square hole of the frame.**

8) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
9) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
10) Install the COVER LEFT (PL1.1.6). (RRP1.3)
11) Install the COVER REAR (PL1.1.3). (RRP1.1)
12) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP1.5 COVER FRONT (PL1.1.5)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
7) Remove the COVER TOP (PL1.1.7). (RRP1.4)
8) Release the 2 hooks of the COVER FRONT securing it to the printer by pressing down the 2 hooks at the upper portion of it, and open it to forward.
9) Shift the COVER FRONT in the direction of the arrows. Remove the COVER FRONT from the printer by releasing the 2 hooks at the lower portion of it.

Replacement

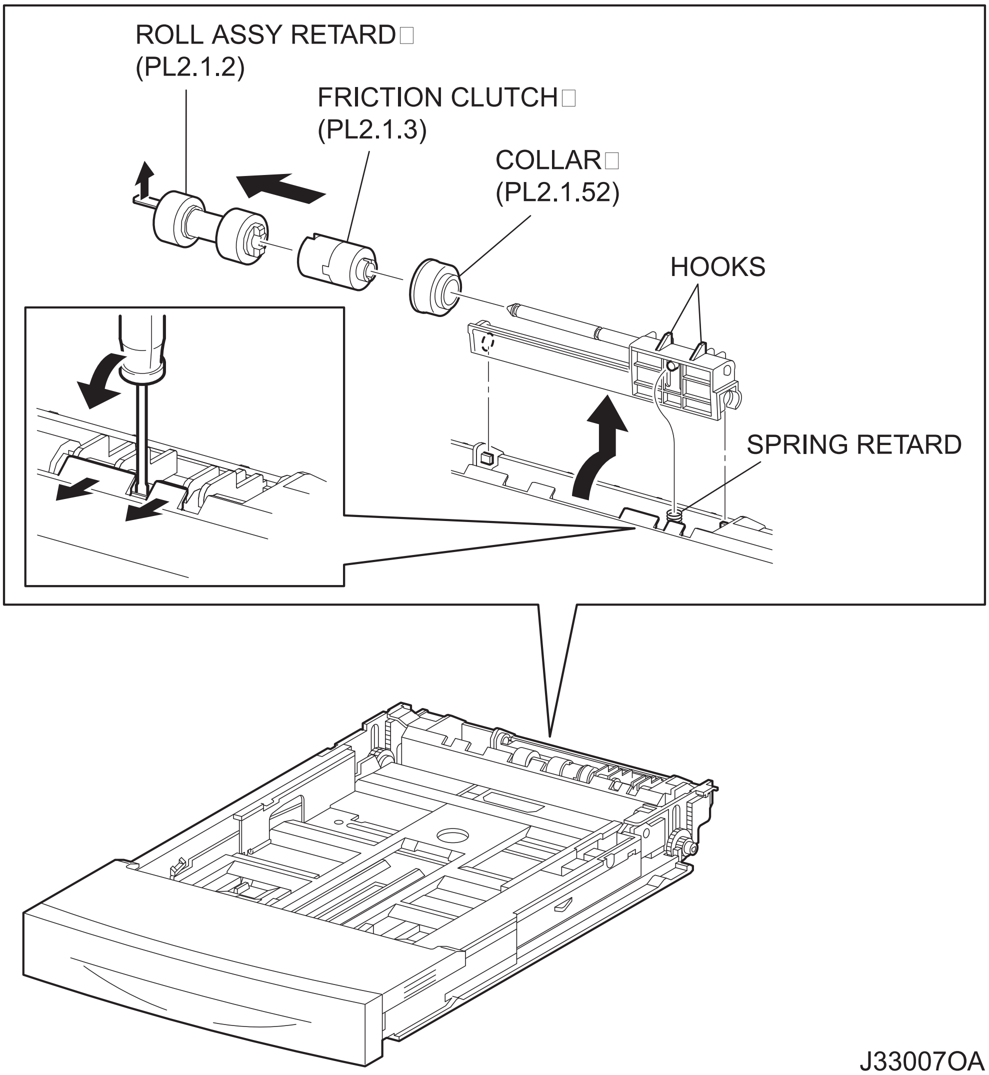
1) Hang the 2 hooks at the lower portion of the COVER FRONT to the printer.
2) Lock the 2 hooks at the upper portion of the COVER FRONT to the printer, and secure it to the printer.
3) Install the COVER TOP (PL1.1.7). (RRP1.4)
4) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)

NOTE **When installing, put the harnesses of the MOTOR ASSY EXIT and HARNESS ASSY EXIT SNR1 into the square hole of the frame.**

5) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
7) Install the COVER LEFT (PL1.1.6). (RRP1.3)
8) Install the COVER REAR (PL1.1.3). (RRP1.1)
9) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

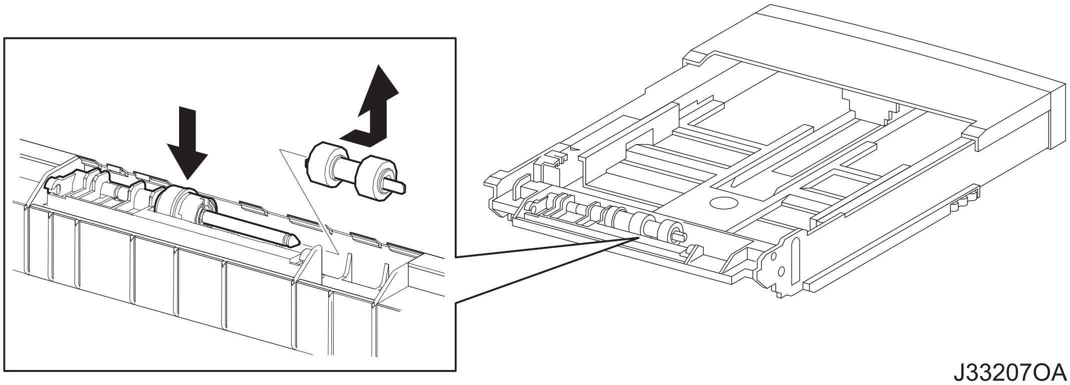
RRP2. 150 Paper Cassette

RRP2.1 ROLL ASSY RETARD (PL2.1.2)


ROLL ASSY RETARD
(PL2.1.2)
FRICTION CLUTCH
(PL2.1.3)
COLLAR
(PL2.1.52)
HOOKS
SPRING RETARD
J33007OA

NOTE

Other than the procedure above, it is possible to remove the ROLL ASSY RETARD by pushing down the HOLDER RETARD.



Removal

1) Pull out the 150 PAPER CASSETTE from the printer.
2) Release the hooks securing the HOLDER RETARD (PL2.1.5) to the 150 PAPER CASSETTE using a screwdriver or the like.
3) Lift up the HOLDER RETARD in the direction of the arrow, and remove it.
4) Release the hook securing the ROLL ASSY RETARD, and pull it out from the SHAFT RETARD (PL2.1.4).

NOTE **When removing, do not hold the rubber rollers of the ROLL ASSY RETARD.**

NOTE **When removing HOLDER RETARD, be careful not to lose SPRING RETARD.**

Replacement

1) Install the ROLL ASSY RETARD to the SHFT RETARD (PL2.1.4), and secure the ROLL ASSY RETARD with the hook.

NOTE **When installing, do not hold the rubber rollers of the ROLL ASSY RETARD.**

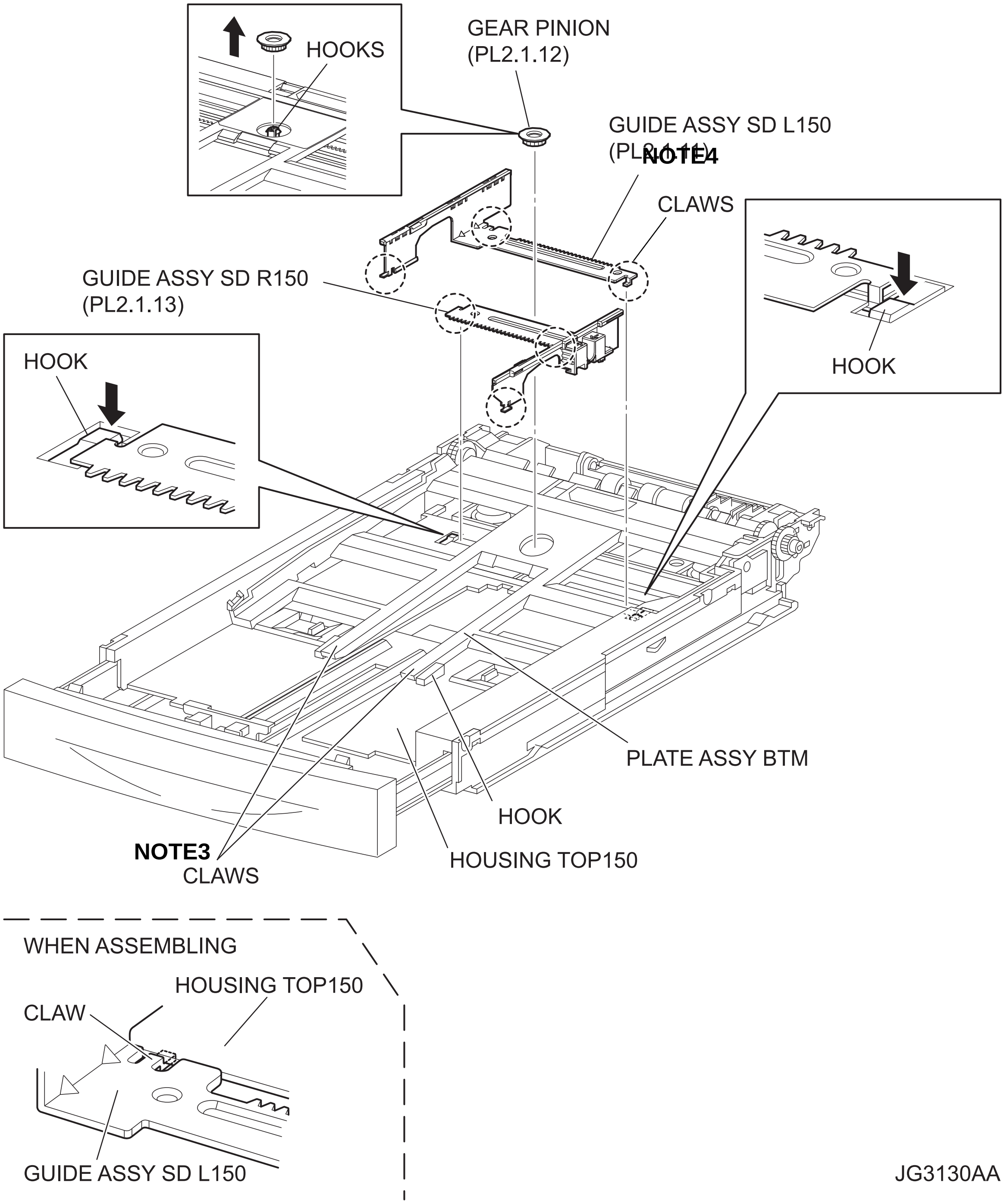
NOTE **Be sure to install the hook of the ROLL ASSY RETARD in the groove of the SHAFT RETARD.**

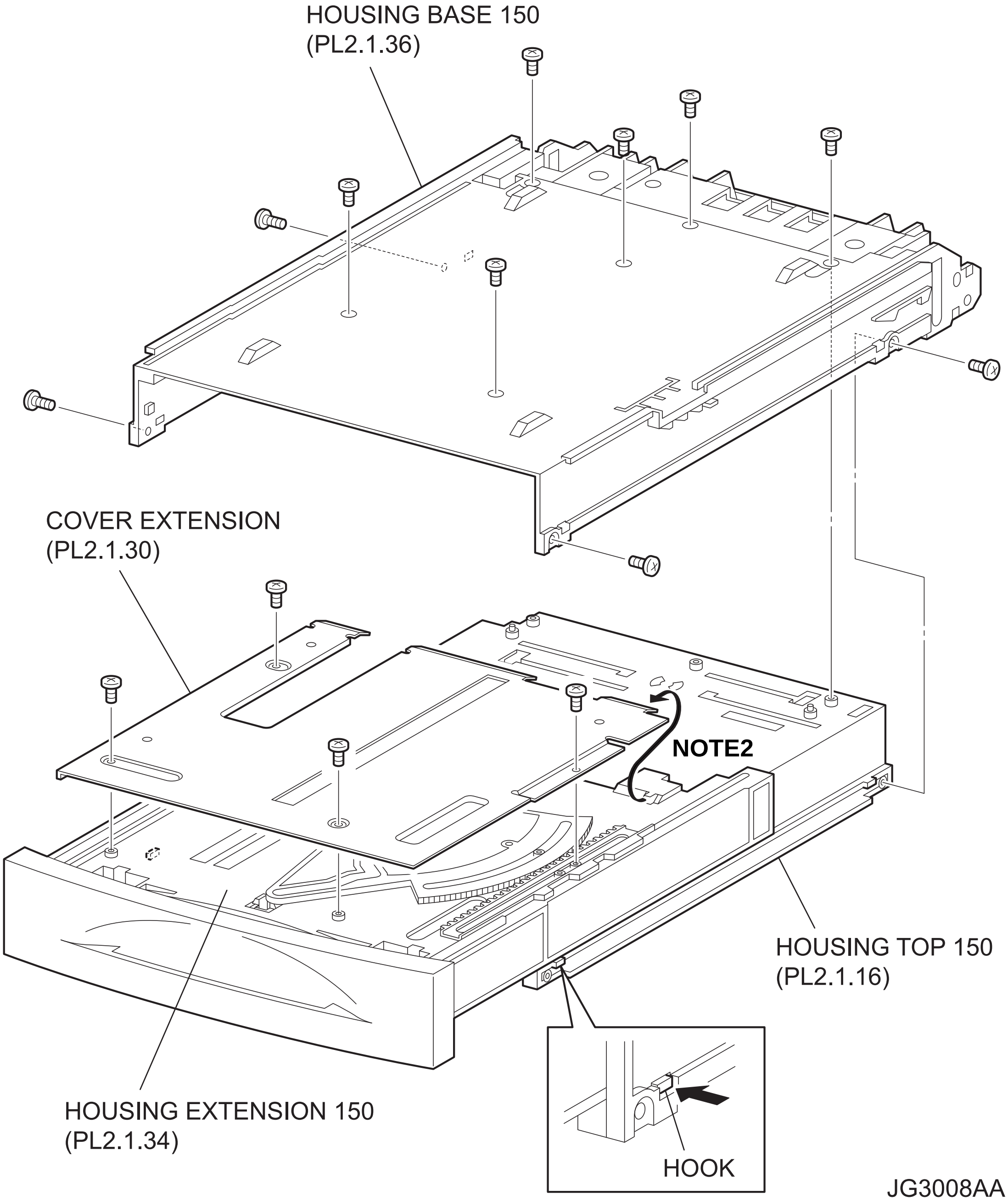
2) Move the HOLDER RETARD (PL2.1.5) in the opposite direction of the arrow, and install it to the 150 PAPER CASSETTE.

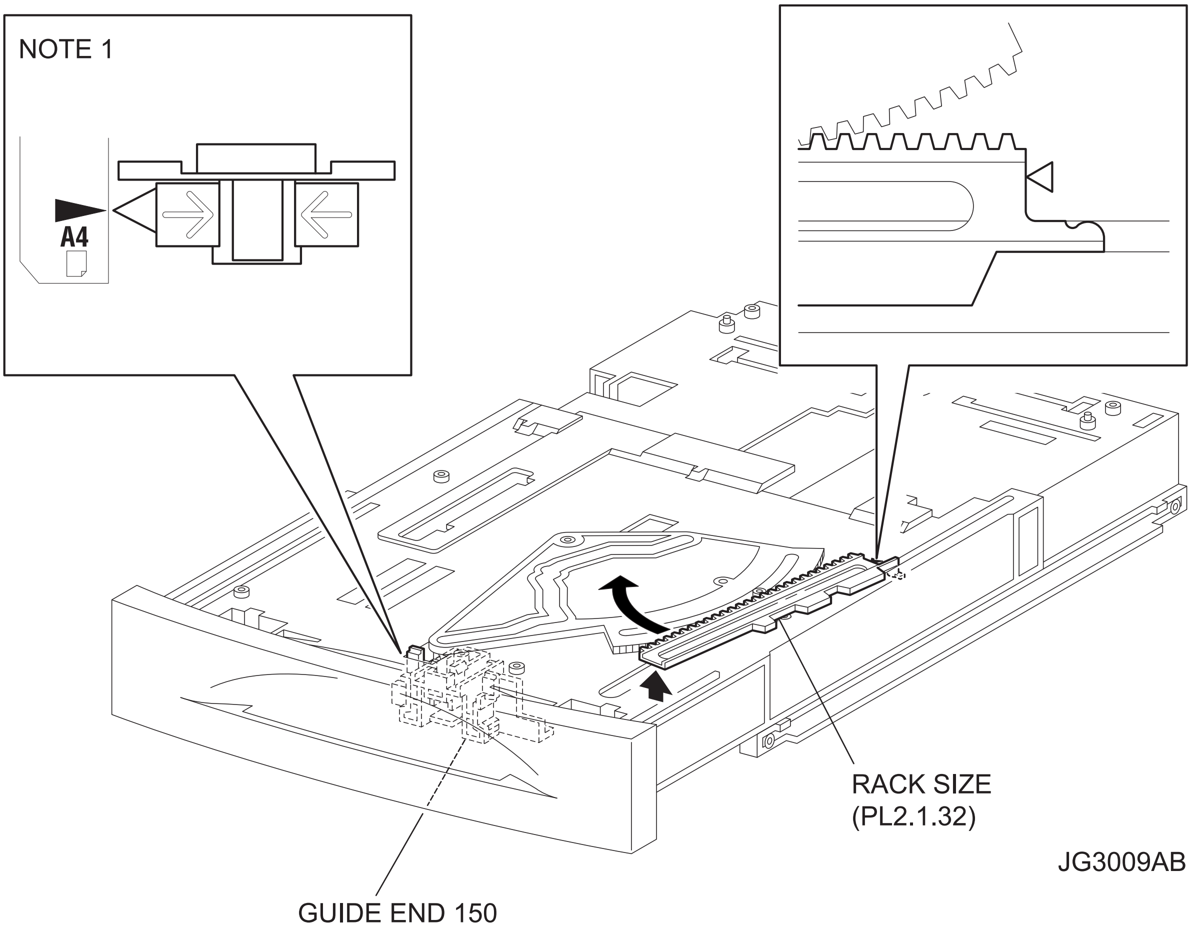
NOTE **After installing, make sure the HOLDER RETARD comes back to the former position with the spring force of the SPRING RETARD (PL2.1.6), when pushing down the HOLDER RETARD and then release the finger from it.**

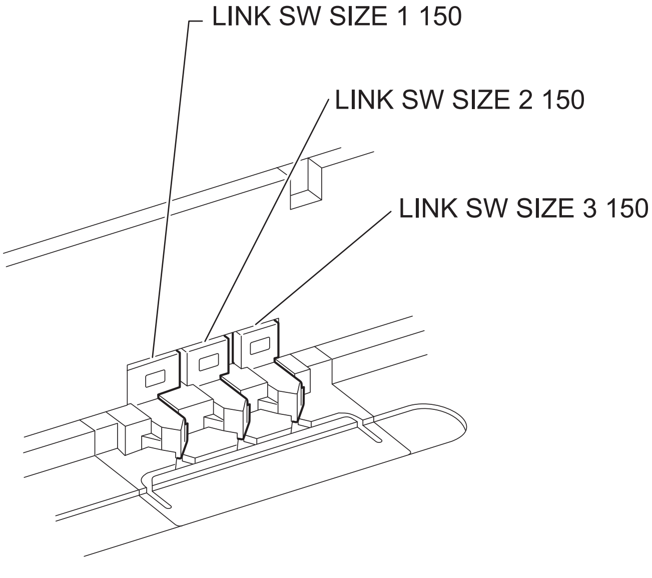
3) Install the 150 PAPER CASSETTE to the printer.

RRP2.2 RACK SIZE (PL2.1.32)


HOOKS
GEAR PINION
(PL2.1.12)
GUIDE ASSY SD L150
(PL2.1.11)
NOTE4
CLAWS
GUIDE ASSY SD R150
(PL2.1.13)
HOOK
HOOK
PLATE ASSY BTM
HOOK
HOUSING TOP150
NOTE3
CLAWS
WHEN ASSEMBLING
HOUSING TOP150
CLAW
GUIDE ASSY SD L150
JG3130AA


HOUSING BASE 150
(PL2.1.36)
COVER EXTENSION
(PL2.1.30)
NOTE2
HOUSING TOP 150
(PL2.1.16)
HOUSING EXTENSION 150
(PL2.1.34)
HOOK
JG3008AA


NOTE 1
A4
RACK SIZE
(PL2.1.32)
JG3009AB
GUIDE END 150


LINK SW SIZE 1 150
LINK SW SIZE 2 150
LINK SW SIZE 3 150

JG3200AB

Removal

1) Remove the COVER CST (PL2.1.1) from the 150 PAPER CASSETTE.
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL2.1.12) to the HOUSING TOP 150 (PL2.1.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL2.1.28), release the lock of the LEVER BTM LOCK (PL2.1.26) to lift up the PLATE ASSY BTM (PL2.1.10).
5) Slide the GUIDE ASSY SD L150 (PL2.1.11) inward, and remove it from the HOUSING TOP 150 by pressing down the hook of the HOUSING TOP 150.
6) Slide the GUIDE ASSY SD R150 (PL2.1.13) inward, and remove it from the HOUSING TOP 150 by pressing down the hook of the HOUSING TOP 150.
7) Remove the 2 screws (gold tapping, 8mm) from both right and left side, as well as the 6 screws (gold tapping, 8mm) on the back, that secure the HOUSING TOP 150 (PL2.1.16) to the HOUSING BASE 150 (PL2.1.36).
8) Release the 4 hooks of the HOUSING TOP 150, and remove the HOUSING TOP 150 and HOUSING EXTENSION 150 (PL2.1.34) from the HOUSING BASE 150.
9) Remove the 4 screws (gold tapping, 6mm) securing the COVER EXTENSION (PL2.1.30) to the HOUSING EXTENSION 150.
10) Remove the COVER EXTENSION from the HOUSING EXTENSION 150.
11) Lift the front of the RACK SIZE (PL2.1.32) a little, and turn it in the direction of the arrow to remove it from the HOUSING EXTENSION 150.

Replacement

1) Put the hook of the tip of the RACK SIZE (PL2.1.32) into the groove of the HOUSING EXTENSION 150, and turn it in the opposite direction of the arrow.
2) Align the end of the RACK SIZE with the triangle mark printed on the HOUSING EXTENSION 150 as shown in the figure, and install the RACK SIZE to the HOUSING EXTENSION 150.

NOTE **When installing the RACK SIZE, be sure to draw out the GUIDE ASSY END 150 (PL2.1.35) as far as it will go.(NOTE1).**

3) Install the COVER EXTENSION (PL2.1.30) to the HOUSING EXTENSION 150 using the 4 screws (gold tapping, 6mm).

NOTE **When installing, make sure the COVER EXTENSION is inserted under 3 claws of the HOUSING EXTENSION 150.(NOTE2).**

NOTE **Use 6mm size of fixed screw. If 8mm size of screw is used, HOUSING EXTENSION 150 doesn't operate smoothly and LOCK EXTENSION 150 doesn't operate correctly.**

4) Install the HOUSING EXTENSION 150 and HOUSING TOP 150 (PL2.1.16) to the HOUSING BASE 150 (PL2.1.36) while pushing the LINK SW SIZE1-150 (PL2.1.37), LINK SW SIZE2-150 (PL2.1.38) and LINK SW SIZE3-150 (PL2.1.39) of the HOUSING BASE 150 outward as shown in the figure.

NOTE **Be sure to put 2 claws that on the top of the PLATE ASSY BTM under the hooks on the HOUSING TOP 150.(NOTE3).**

5) After assembling the HOUSING TOP 150 to HOUSING BASE 150 using the 4 hooks, secure them using the 2 screws (gold tapping, 8mm) on both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back.

NOTE **After tightening the screws, move the GUIDE ASSY END 150 back and forth, and make sure that the LINK SW SIZEs operate smoothly.**

6) While pressing down the hook of the HOUSING TOP 150, install the GUIDE ASSY SD R150 (PL2.1.13) to the HOUSING TOP 150.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R150 sit correctly in the grooves of the HOUSING TOP 150.(NOTE4).**

7) While pressing down the hook of the HOUSING TOP 150, install the GUIDE ASSY SD L150 (PL2.1.11) to the HOUSING TOP 150.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L150 sit correctly in the grooves of the HOUSING TOP 150.(NOTE4)**

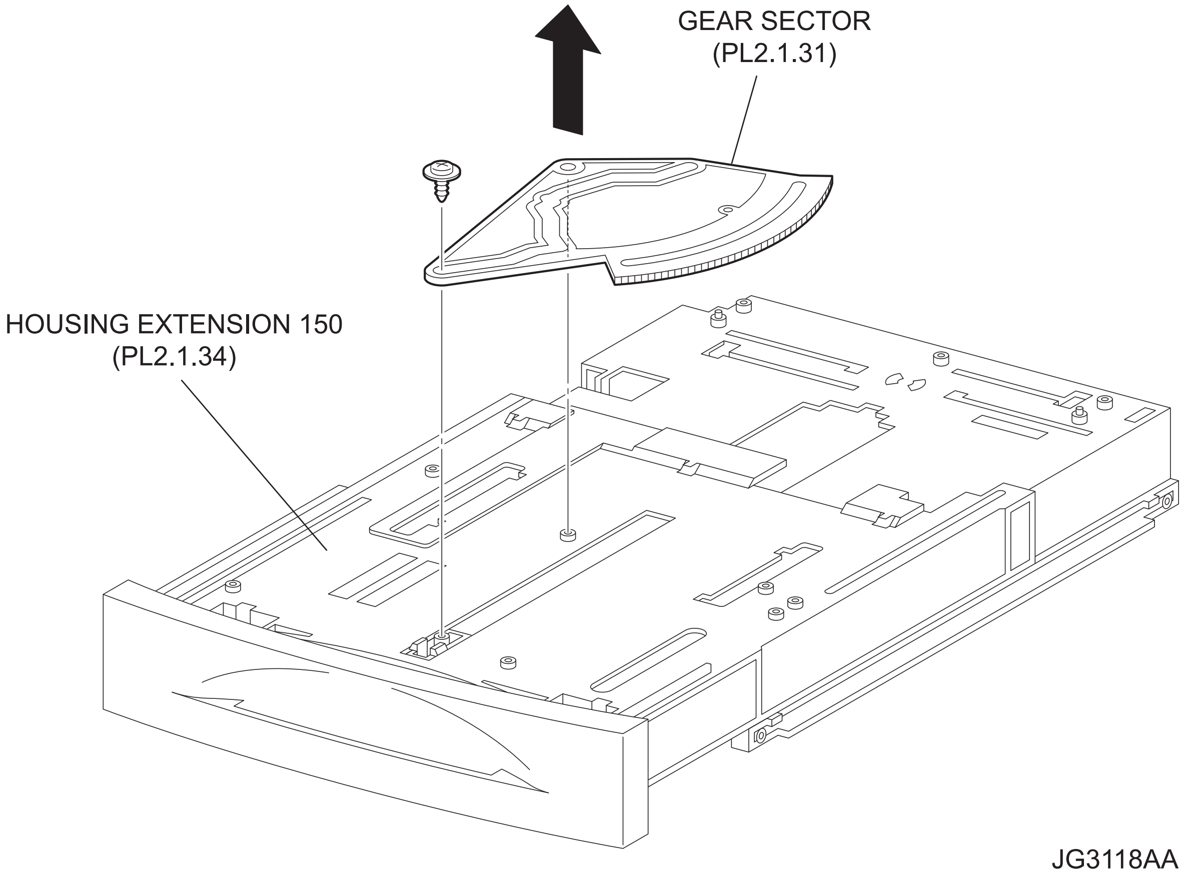
8) Push the PLATE ASSY BTM downward to lock.

9) With completely opened GUIDE ASSY SD L150 (PL2.1.11) and GUIDE ASSY SD R150 (PL2.1.13) to the both sides, install the GEAR PINION (PL2.1.12) to the HOUSING TOP 150.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R150 and GUIDE ASSY SD L150 are completely opened. If not, the side register may be misaligned.**

10) Install the COVER CST (PL2.1.1) to the 150 PAPER CASSETTE.

RRP2.3 GEAR SECTOR (PL2.1.31)



Removal

1) Remove the COVER CST (PL2.1.1) from the 150 PAPER CASSETTE.
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL2.1.12) to the HOUSING TOP 150 (PL2.1.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL2.1.28), release the lock of the LEVER BTM LOCK (PL2.1.26) to lift up the PLATE ASSY BTM (PL2.1.10).
5) Slide the GUIDE ASSY SD L150 (PL2.1.11) inward, and remove it from the HOUSING TOP 150 by pressing down the hook of the HOUSING TOP 150.
6) Slide the GUIDE ASSY SD R150 (PL2.1.13) inward, and remove it from the HOUSING TOP 150 by pressing down the hook of the HOUSING TOP 150.
7) Remove the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back, that secure the HOUSING TOP 150 (PL2.1.16) to the HOUSING BASE 150 (PL2.1.36).

8) Release the 4 hooks of the HOUSING TOP 150, and remove the HOUSING TOP 150 and HOUSING EXTENSION 150 (PL2.1.34) from the HOUSING BASE 150.
9) Remove the 4 screws (gold tapping, 6mm) securing the COVER EXTENSION (PL2.1.30) to the HOUSING EXTENSION 150.
10) Remove the COVER EXTENSION from the HOUSING EXTENSION 150.
11) Remove the RACK SIZE (PL2.1.32). (RRP2.2)
12) Remove the screw (black with flange, 8mm) securing the GEAR SECTOR.
13) Remove the GEAR SECTOR from the HOUSING EXTENSION 150.

Replacement

1) Install the GEAR SECTOR to the HOUSING EXTENSION 150 (PL2.1.34).
2) Secure the GEAR SECTOR using the screw (black with flange, 8mm).
3) Install the RACK SIZE 150 (PL2.1.32). (RRP2.2)
4) Install the COVER EXTENSION (PL2.1.30) to the HOUSING EXTENSION 150 using the 4 screws (gold tapping, 6mm).

NOTE **When installing, make sure the COVER EXTENSION is inserted under 3 claws of the HOUSING EXTENSION 150.**

NOTE **Use 6mm size of fixed screw. If 8mm size of screw is used, HOUSING EXTENSION 150 doesn't operate smoothly and LOCK EXTENSION 150 doesn't operate correctly.**

5) Install the HOUSING EXTENSION 150 and HOUSING TOP 150 (PL2.1.16) to the HOUSING BASE 150 (PL2.1.36) while pushing the LINK SW SIZE1-150 (PL2.1.37), LINK SW SIZE2-150 (PL2.1.38) and LINK SW SIZE3-150 (PL2.1.39) of the HOUSING BASE 150 outward as shown in the figure.(Figure 2.2)

NOTE **Be sure to put 2 claws that on the top of the PLATE ASSY BTM under the hooks on the HOUSING TOP 150.**

6) After assembling the HOUSING TOP 150 to HOUSING BASE 150 using the 4 hooks, secure them using the 2 screws (gold tapping, 8mm) on both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back.

NOTE **After tightening the screws, move the GUIDE ASSY END 150 back and forth, and make sure that the LINK SW SIZEs operate smoothly.**

7) While pressing down the hook of the HOUSING TOP 150, install the GUIDE ASSY SD R150 (PL2.1.13) to the HOUSING TOP 150.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R150 sit correctly in the grooves of the HOUSING TOP 150.**

8) While pressing down the hook of the HOUSING TOP 150, install the GUIDE ASSY SD L150 (PL2.1.11) to the HOUSING TOP 150.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L150 sit correctly in the grooves of the HOUSING TOP 150.**

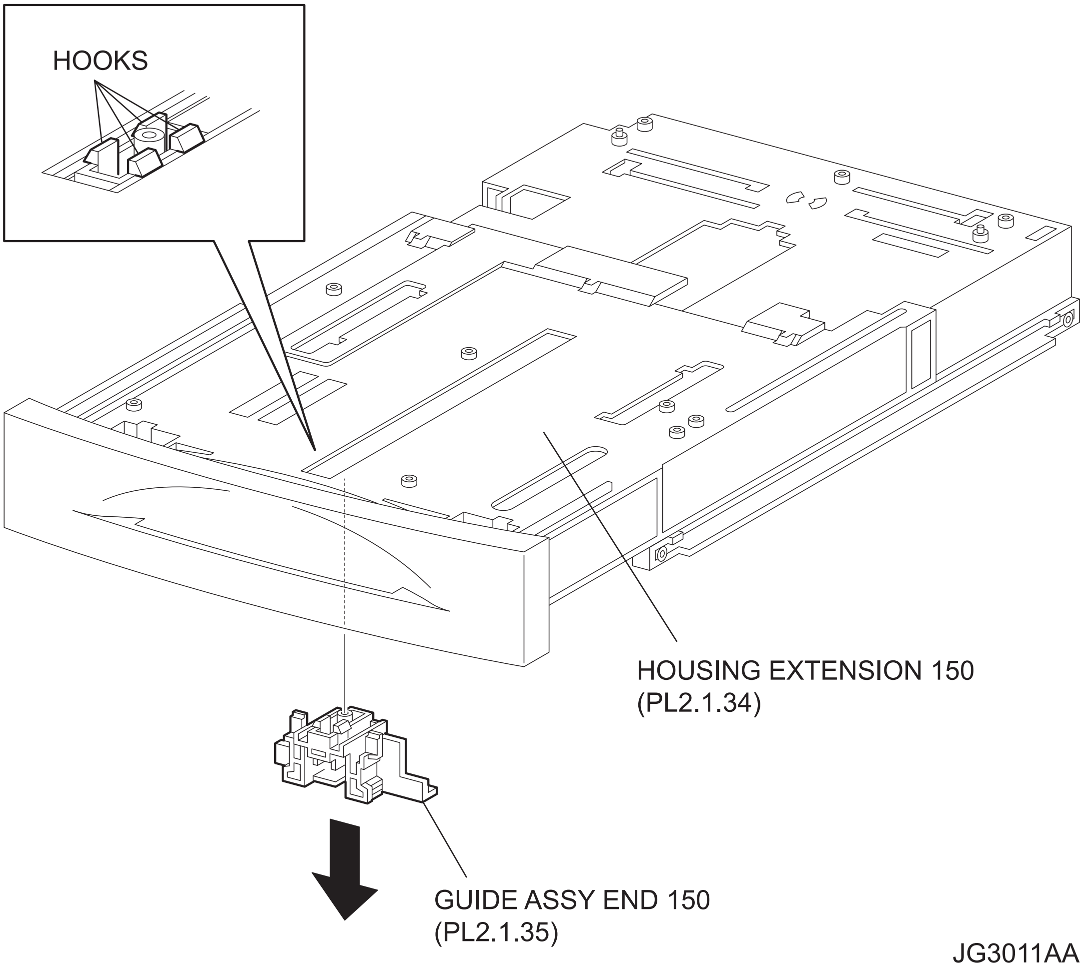
9) Push the PLATE ASSY BTM downward to lock.

10) With completely opened GUIDE ASSY SD L150 (PL2.1.11) and GUIDE ASSY SD R150 (PL2.1.13) to the both sides, install the GEAR PINION (PL2.1.12) to the HOUSING TOP 150.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R150 and GUIDE ASSY SD L150 are completely opened. If not, the side register may be misaligned.**

11) Install the COVER CST (PL2.1.1) to the 150 PAPER CASSETTE.

RRP2.4 GUIDE ASSY END 150 (PL2.1.35)



Removal

1) Remove the COVER CST (PL2.1.1) from the 150 PAPER CASSETTE.
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL2.1.12) to the HOUSING TOP 150 (PL2.1.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL2.1.28), release the lock of the LEVER BTM LOCK (PL2.1.26) to lift up the PLATE ASSY BTM (PL2.1.10). (Figure 3.5)
5) Slide the GUIDE ASSY SD L150 (PL2.1.11) inward, and remove it from the HOUSING TOP 150 by pressing down the hook of the HOUSING TOP 150.
6) Slide the GUIDE ASSY SD R150 (PL2.1.13) inward, and remove it from the HOUSING TOP 150 by pressing down the hook of the HOUSING TOP 150.
7) Remove the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back, that secure the HOUSING TOP 150 (PL2.1.16) to the HOUSING BASE 150 (PL2.1.36).

8) Release the 4 hooks of the HOUSING TOP 150, and remove the HOUSING TOP 150 and HOUSING EXTENSION 150 (PL2.1.34) from the HOUSING BASE 150.
9) Remove the 4 screws (gold tapping, 6mm) securing the COVER EXTENSION (PL2.1.30) to the HOUSING EXTENSION 150.
10) Remove the COVER EXTENSION from the HOUSING EXTENSION 150.
11) Remove the RACK SIZE (PL2.1.32). (RRP2.2)
12) Remove the GEAR SECTOR (PL2.1.31). (RRP2.3)
13) Release the hooks securing the GUIDE ASSY END 150 to the HOUSING EXTENSION 150.

NOTE **Be careful handling the hooks of the GUIDE ASSY END150. They are fragile and could break if given excessive force.**

14) Remove the GUIDE ASSY END 150 from the HOUSING EXTENSION 150.

Replacement

1) Secure the GUIDE ASSY END 150 to the HOUSING EXTENSION 150 (PL2.1.34) using the 4 hooks.
2) Install the GEAR SECTOR (PL2.1.31). (RRP2.3)
3) Install the RACK SIZE (PL2.1.32). (RRP2.2)
4) Install the COVER EXTENSION (PL2.1.30) to the HOUSING EXTENSION 150 using the 4 screws (gold tapping, 6mm).

NOTE **When installing, make sure the COVER EXTENSION is inserted under 3 claws of the HOUSING EXTENSION 150.**

NOTE **Use 6mm size of fixed screw. If 8mm size of screw is used, HOUSING EXTENSION 150 doesn't operate smoothly and LOCK EXTENSION 150 doesn't operate correctly.**

5) Install the HOUSING EXTENSION 150 and HOUSING TOP 150 (PL2.1.16) to the HOUSING BASE 150 (PL2.1.36) while pushing the LINK SW SIZE1-150 (PL2.1.37), LINK SW SIZE2-150 (PL2.1.38) and LINK SW SIZE3-150 (PL2.1.39) of the HOUSING BASE 150 outward as shown in the figure. (Figure 2.2)

NOTE **Be sure to put 2 claws that on the top of the PLATE ASSY BTM under the hooks on the HOUSING TOP 150.**

6) After assembling the HOUSING TOP 150 to the HOUSING BASE 150 using the 4 hooks, secure them using the 2 screws (gold tapping, 8mm) on both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back.

NOTE **After tightening the screws, move the GUIDE ASSY END 150 back and forth, and make sure that the LINK SW SIZEs operate smoothly.**

7) While pressing down the hook of the HOUSING TOP 150, install the GUIDE ASSY SD R150 (PL2.1.13) to the HOUSING TOP 150.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R150 sit correctly in the grooves of the HOUSING TOP 150.**

8) While pressing down the hook of the HOUSING TOP 150, install the GUIDE ASSY SD L150 (PL2.1.11) to the HOUSING TOP 150.

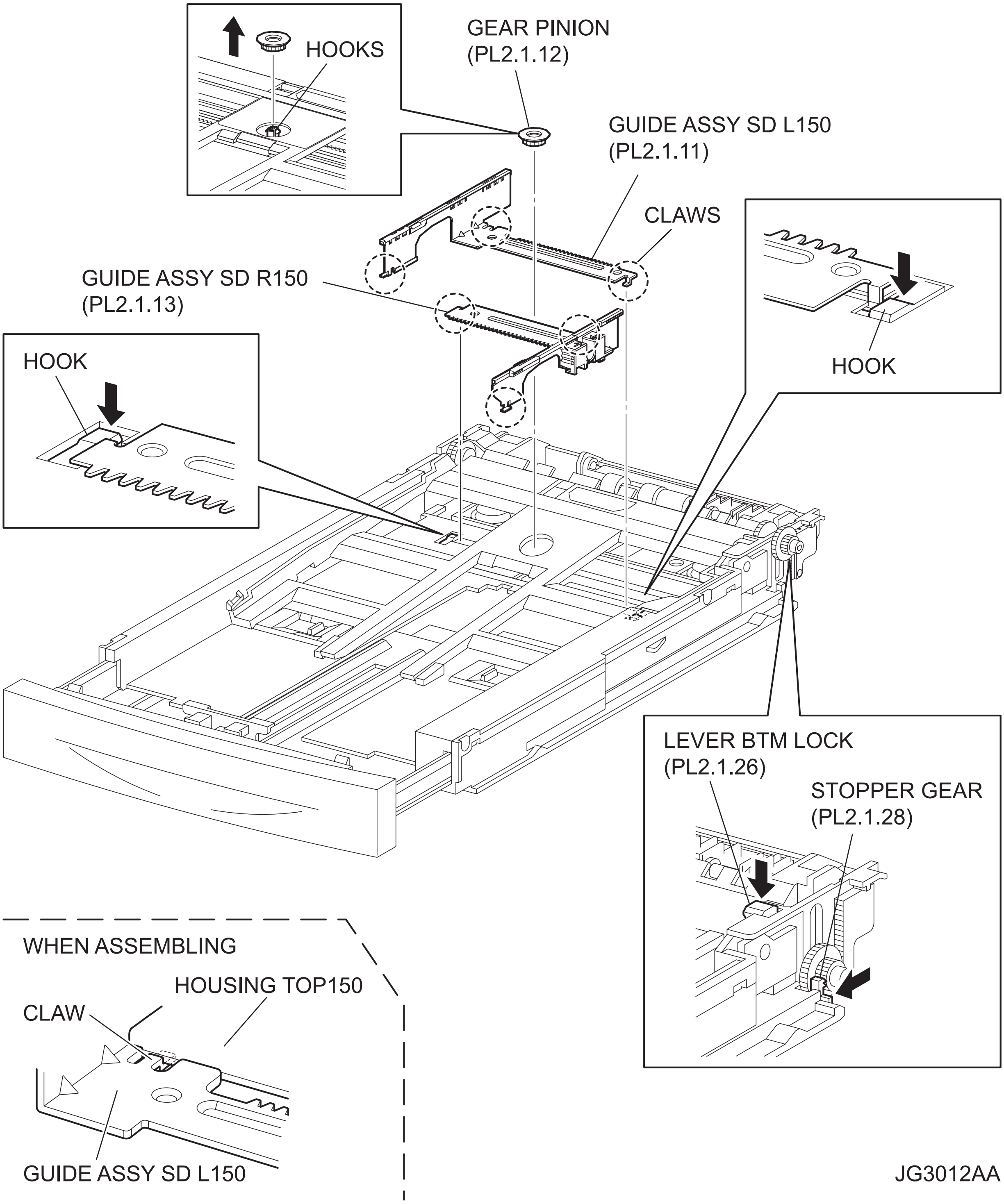
NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L150 sit correctly in the grooves of the HOUSING TOP 150.**

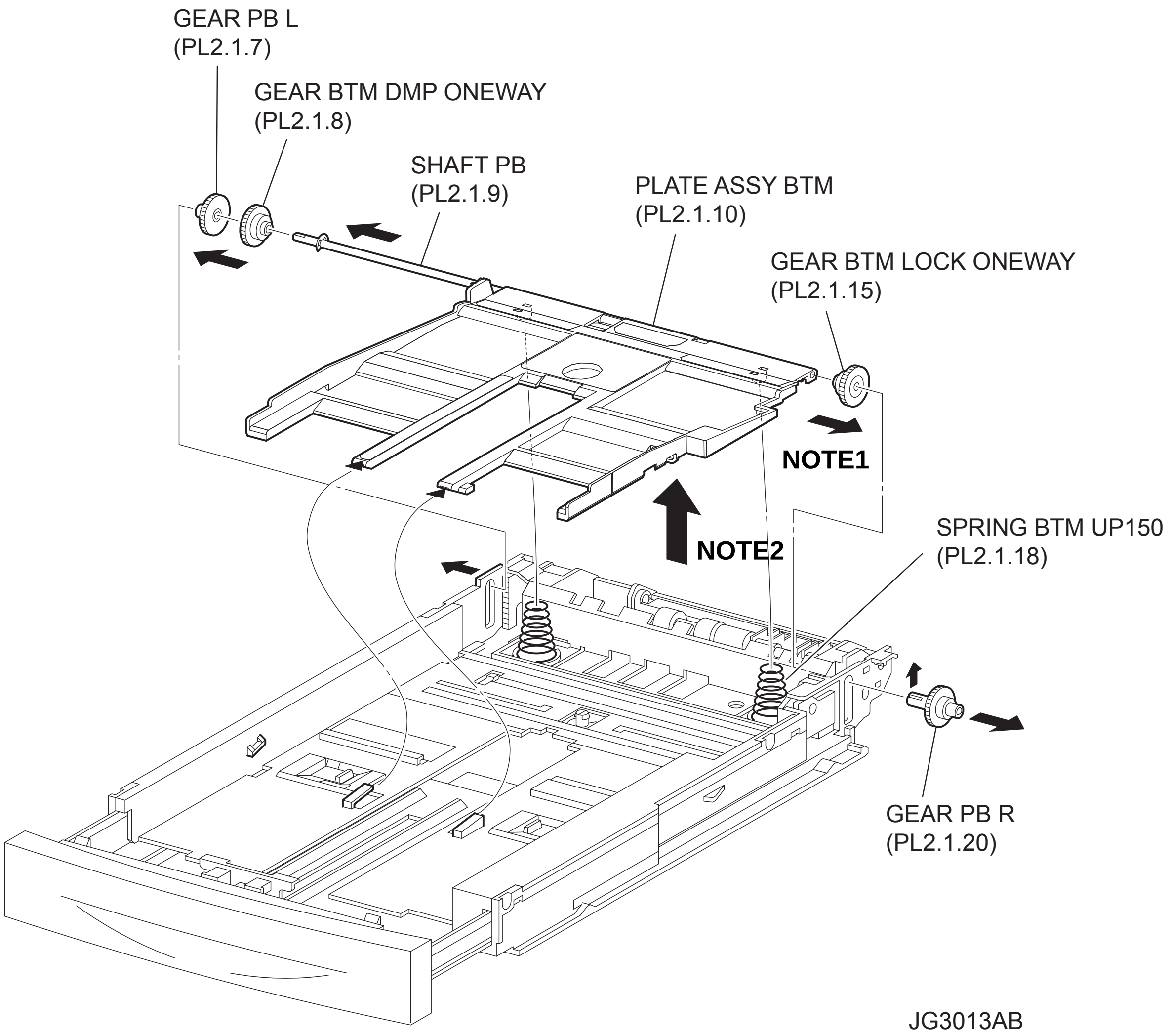
9) Push the PLATE ASSY BTM downward to lock.
10) With completely opened GUIDE ASSY SD L150 (PL2.1.11) and GUIDE ASSY SD R150 (PL2.1.13) to the both sides, install the GEAR PINION (PL2.1.12) to the HOUSING TOP 150.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R150 and GUIDE ASSY SD L150 are completely opened. If not, the side register may be misaligned.**

11) Install the COVER CST (PL2.1.1) to the 150 PAPER CASSETTE

RRP2.5 PLATE ASSY BTM (PL2.1.10)


HOOKS
GEAR PINION
(PL2.1.12)
GUIDE ASSY SD L150
(PL2.1.11)
CLAWS
GUIDE ASSY SD R150
(PL2.1.13)
HOOK
HOOK
LEVER BTM LOCK
(PL2.1.26)
STOPPER GEAR
(PL2.1.28)
WHEN ASSEMBLING
HOUSING TOP150
CLAW
GUIDE ASSY SD L150
JG3012AA


GEAR PB L
(PL2.1.7)
GEAR BTM DMP ONEWAY
(PL2.1.8)
SHAFT PB
(PL2.1.9)
PLATE ASSY BTM
(PL2.1.10)
GEAR BTM LOCK ONEWAY
(PL2.1.15)
NOTE1
NOTE2
SPRING BTM UP150
(PL2.1.18)
GEAR PB R
(PL2.1.20)
JG3013AB

Removal

1) Remove the COVER CST (PL2.1.1) from the 150 PAPER CASSETTE.
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL2.1.12) to the HOUSING TOP 150 (PL2.1.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL2.1.28), release the lock of the LEVER BTM LOCK (PL2.1.26) to lift up the PLATE ASSY BTM (PL2.1.10).
5) Slide the GUIDE ASSY SD L150 (PL2.1.11) inward, and remove it from the HOUSING TOP 150 by pressing down the hook of the HOUSING TOP 150.
6) Slide the GUIDE ASSY SD R150 (PL2.1.13) inward, and remove it from the HOUSING TOP 150 by pressing down the hook of the HOUSING TOP 150.

NOTE **In the following steps, the GEAR PB L (PL2.1.7), GEAR BTM DMP ONEWAY (PL2.1.8) and GEAR BTM LOCK ONEWAY (PL2.1.15) will be detached. Be careful not to lose these gears.**

7) Release the hook of the GEAR PB R (PL2.1.20), and remove it from the SHAFT PB (PL2.1.9).

NOTE **It is hard to remove GEAR PB R. When removing it, be careful not to break it.**

8) Disengage the GEAR PB L from the PLATE GEAR LOCK 150 while bending the HOUSING BASE 150 in the direction of the arrows. Remove the PLATE ASSY BTM together with the SHAFT PB, GEAR PB L, GEAR BTM DMP ONEWAY, and GEAR BTM LOCK ONEWAY from the HOUSING TOP 150.

9) Pull out the SHAFT PB from the PLATE ASSY BTM, and remove the GEAR PB L, GEAR BTM DMP ONEWAY and GEAR BTM LOCK ONEWAY.

Replacement

1) Insert the SHAFT PB (PL2.1.9) into the PLATE ASSY BTM, and insert the GEAR BTM DMP ONEWAY (PL2.1.8), GEAR PB L (PL2.1.7),and GEAR BTM LOCK ONEWAY (PL2.1.15) to the SHAFT PB.

2) While disengaging the GEAR PB L, install the assembled PLATE ASSY BTM to the HOUSING TOP 150 (PL2.1.16).

NOTE **When installing the PLATE ASSY BTM, be sure to put 2 SPRING BTM UP 150s (PL2.1.18) into the bosses on the back of the PLATE ASSY BTM.(NOTE1).**

NOTE **Be sure to put 2 claws that on the top of the PLATE ASSY BTM under the hooks on the HOUSING TOP 150.(NOTE2).**

3) Install the GEAR PB R (PL2.1.20) to the SHAFT PB, and secure it with the hook.

NOTE **Be sure to install the hook of the GEAR PB R into the groove of the SHAFT PB.**

NOTE **When installing the GEAR PB R, be sure to lift up the PLATE ASSY BTM. If the PLATE ASSY BTM is inclined, a paper skew or jam may occur. Check after the installation is completed.**

4) While pressing down the hook of the HOUSING TOP 150, install the GUIDE ASSY SD R150 (PL2.1.13) to the HOUSING TOP 150.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R150 sit correctly in the grooves of the HOUSING TOP 150.(NOTE3).**

5) While pressing down the hook of the HOUSING TOP 150, install the GUIDE ASSY SD L150 (PL2.1.11) to the HOUSING TOP 150.

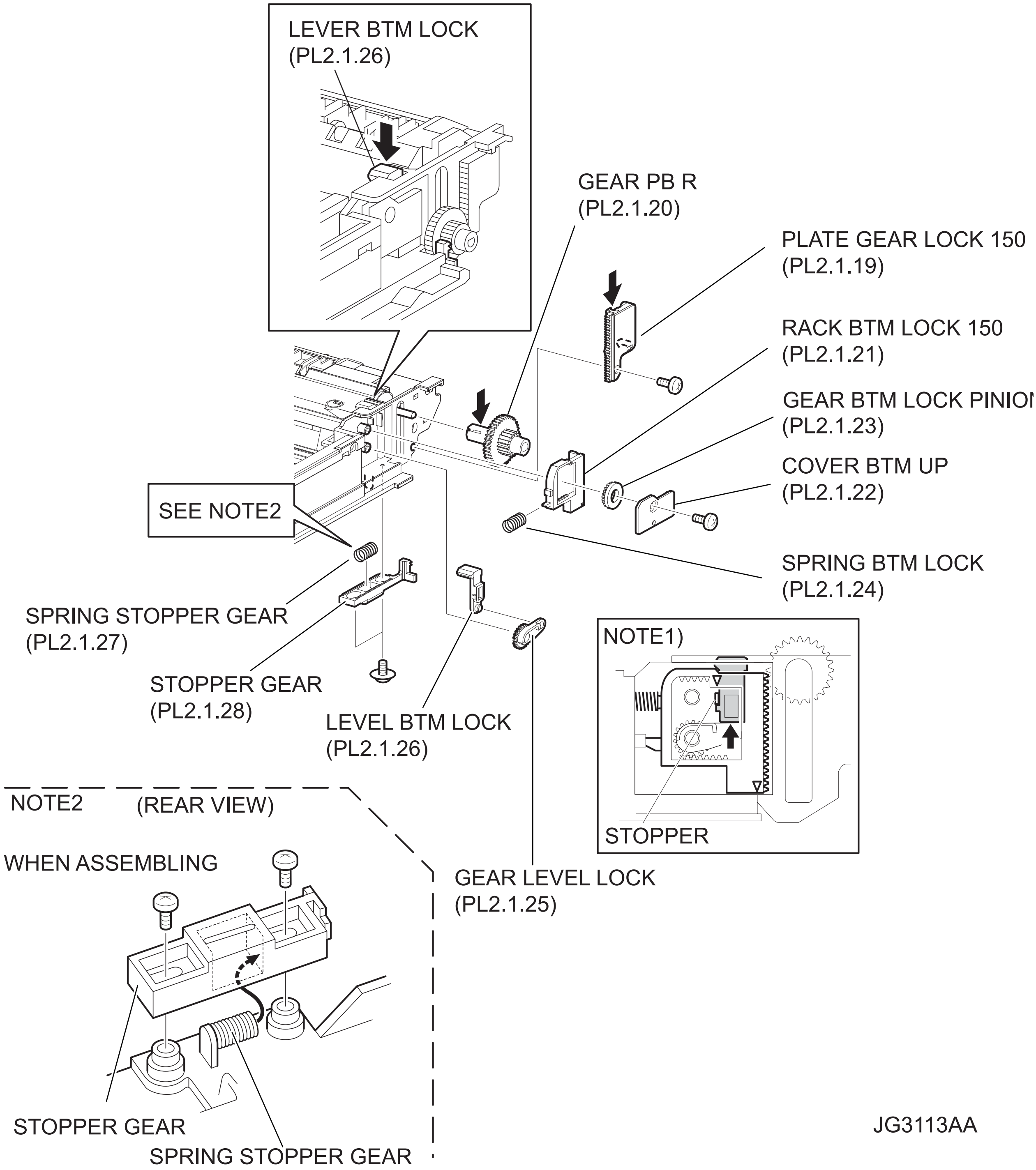
NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L150 sit correctly in the grooves of the HOUSING TOP 150.**

6) Push the PLATE ASSY BTM downward to lock.
7) Install the GEAR PINION (PL2.1.12) to the HOUSING TOP 150.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R150 and GUIDE ASSY SD L150 are completely opened. If not, the side register may be misaligned.**

8) Install the COVER CST (PL2.1.1) to the 150 PAPER CASSETTE.

RRP2.6 GEAR LEVER LOCK (PL2.1.25), LEVER BTM LOCK (PL2.1.26)


LEVER BTM LOCK
(PL2.1.26)
GEAR PB R
(PL2.1.20)
PLATE GEAR LOCK 150
(PL2.1.19)
RACK BTM LOCK 150
(PL2.1.21)
GEAR BTM LOCK PINIO
(PL2.1.23)
COVER BTM UP
(PL2.1.22)
SEE NOTE2
SPRING BTM LOCK
(PL2.1.24)
SPRING STOPPER GEAR
(PL2.1.27)
STOPPER GEAR
(PL2.1.28)
LEVEL BTM LOCK
(PL2.1.26)
NOTE1)
STOPPER
GEAR LEVEL LOCK
(PL2.1.25)
NOTE2
(REAR VIEW)
WHEN ASSEMBLING
STOPPER GEAR
SPRING STOPPER GEAR
JG3113AA

Removal

1) Remove the COVER CST (PL2.1.1) from the 150 PAPER CASSETTE.
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) While pressing down the lock of the STOPPER GEAR (PL2.1.28), release the lock of LEVER BTM LOCK (PL2.1.26) to lift up the PLATE ASSY BTM (PL2.1.10).
4) Remove the screw (gold tapping, 8mm) securing the PLATE GEAR LOCK 150 (PL2.1.19) at the GEAR PB R (PL2.1.20) side.
5) Release the hook of the PLATE GEAR LOCK 150, and remove it from the HOUSING BASE 150 (PL2.1.36).
6) Release the hook of the GEAR PB R, and remove it from the SHAFT PB (PL2.1.9).
7) Remove the screw (gold tapping, 6mm) securing the COVER BTM UP 150 (PL2.1.22), and remove it from the HOUSING BASE 150.
8) Remove the GEAR BTM LOCK PINION (PL2.1.23) from the HOUSING BASE 150.
9) Remove the RACK BTM LOCK 150 (PL2.1.21) together with the SPRING BTM LOCK (PL2.1.24) from the HOUSING BASE 150.
10) Remove the GEAR LEVER LOCK from the HOUSING BASE 150.
11) Remove the 2 screws (gold tapping, 6mm) securing the STOPPER GEAR (PL2.1.28), and remove the STOPPER GEAR and SPRING STOPPER GEAR (PL2.1.27) from the HOUSING BASE 150.

NOTE **When removing the STOPPER GEAR, be careful not to lose the SPRING STOPPER GEAR.**

Replacement

NOTE **When installing, be sure to lift up the PLATE ASSY BTM. If the PLATE ASSY BTM is inclined, a paper skew or jam may occur. Check after the installation is completed.**

1) Put the SPRING STOPPER GEAR (PL2.1.27) into the STOPPER GEAR (PL2.1.28), and secure the STOPPER GEAR to the HOUSING BASE 150 (PL2.1.36) using the 2 screws (gold tapping, 6mm).

NOTE **When installing the STOPPER GEAR, be careful not to lose the SPRING STOPPER GEAR.**

NOTE **Install the STOPPER GEAR so that one end of the SPRING STOPPER GEAR is in contact with the plate located on the back of the HOUSING BASE 150 as shown in the figure. (Refer to NOTE 2.)**

2) Install the GEAR LEVER LOCK (PL2.1.25) to the HOUSING BASE 150.

3) Install the SPRING BTM LOCK (PL2.1.14) to the projection of the RACK BTM LOCK 150 (PL2.1.21), and install them to the HOUSING BASE 150.

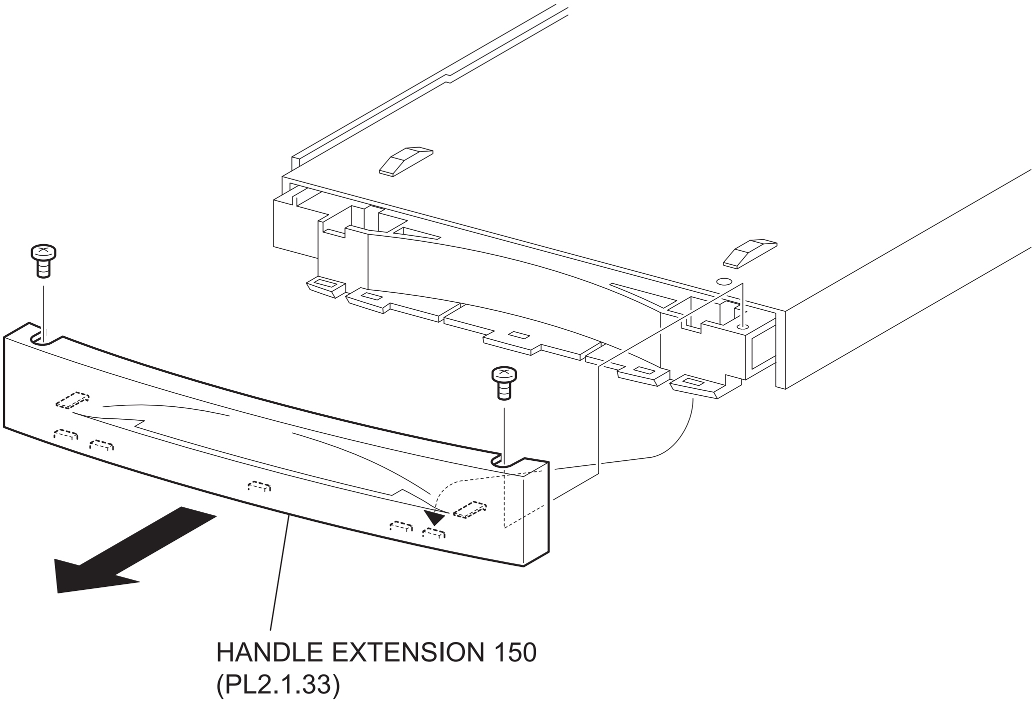
NOTE **When installing the RACK BTM LOCK150, be sure to install it with the LEVER BTM LOCK lifted up. After installing, push down the LEVER BTM LOCK and then release the finger from it, check that the projection of the LEVER BTM LOCK is hit the stopper of the HOUSING BASE150 and the triangle mark is placed above the stopper.**

4) Install the GEAR BTM LOCK PINION (PL2.1.23) to the HOUSING BASE 150, and engage the gear.
5) Secure the COVER BTM UP 150 (PL2.1.22) to the HOUSING BASE 150 using the screw (gold tapping, 6mm).
6) Install the GEAR PB R (PL2.1.20) to the SHAFT PB (PL2.1.9), and secure it with the hook.

NOTE **Be sure to install the hook of the GEAR PB R into the groove of the SHAFT PB.**

7) Install the PLATE GEAR LOCK 150 (PL2.1.19) to the HOUSING BASE 150, and secure it with the hook.
8) Secure the PLATE GEAR LOCK 150 using the screw (gold tapping, 8mm).
9) Push the PLATE ASSY BTM (PL2.1.10) downward to lock.

RRP2.7 HANDLE EXTENSION 150 (PL2.1.33)



JG3301AA

Removal

1) Remove the COVER CST (PL2.1.1) from the 150 PAPER CASSETTE.
2) Remove the 2 screws on the back side of the HANDLE EXTENSION 150 (PL2.1.33).
3) Release the 5 hooks at the upper side and the 2 hooks at the lower side of the HANDLE EXTENSION 150(PL2.1.33), then, remove the HANDLE EXTENSION 150 (PL2.1.33) from the HOUSING EXTENSION 150 (PL2.1.34).

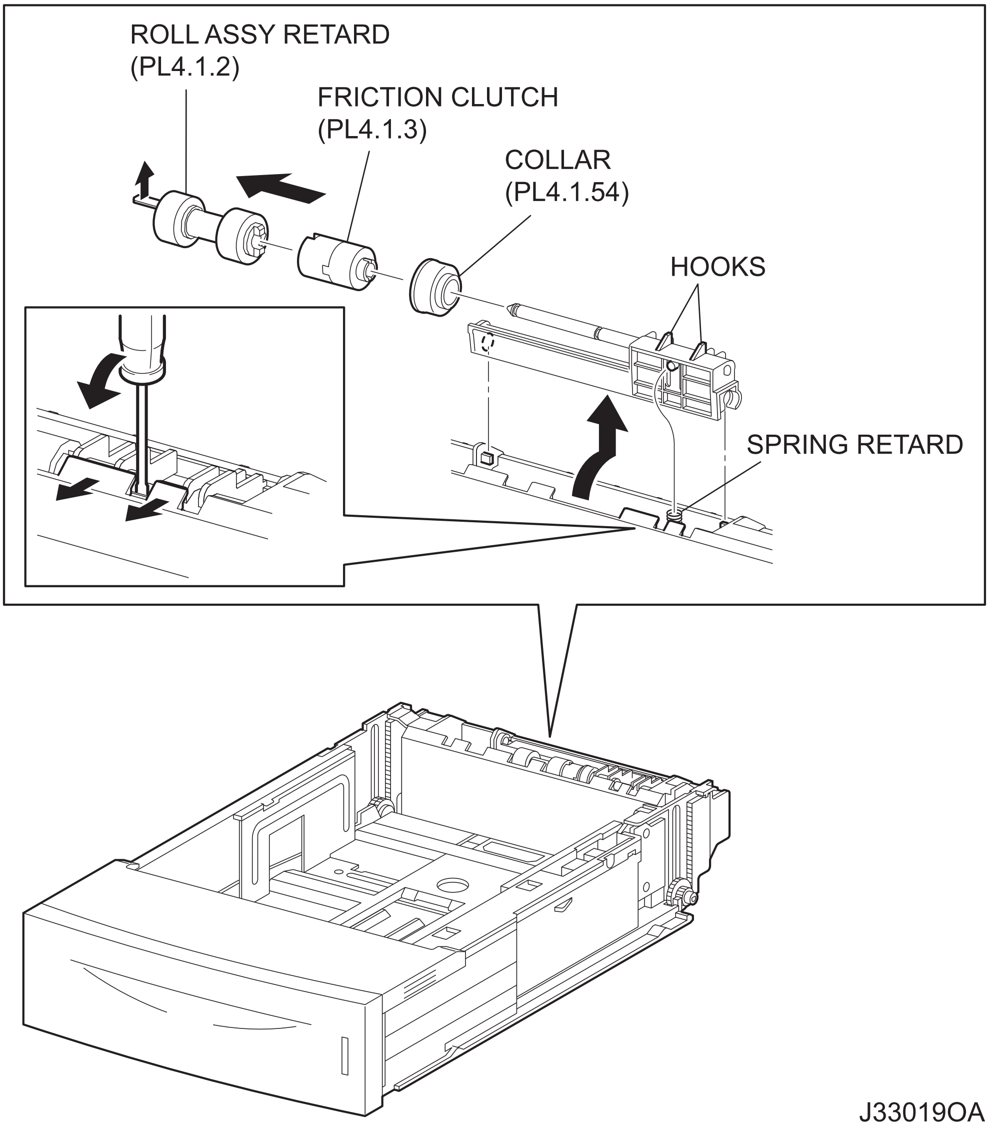
Replacement

1) Put the 5 hooks on the upper side and 2 hooks on the lower side of the HANDLE EXTENSION 150 (PL2.1.33) to the HOUSING EXTENSION 150 (PL2.1.34).
2) Secure the HANDLE EXTENSION 150 (PL2.1.33) to the HOUSING EXTENSION 150 (PL2.1.34) using the 2 screws.
3) Install the COVER CST (PL2.1.1) to the 150 PAPER CASSETTE.

RRP3. Blank

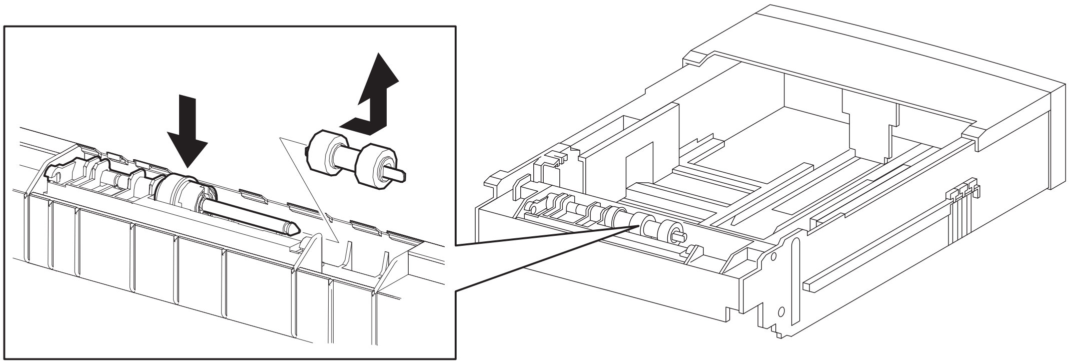
RRP4. 550 Paper Cassette

RRP4.1 ROLL ASSY RETARD (PL4.1.2)


ROLL ASSY RETARD
(PL4.1.2)
FRICTION CLUTCH
(PL4.1.3)
COLLAR
(PL4.1.54)
HOOKS
SPRING RETARD
J33019OA

NOTE

Other than the procedure above, it is possible to remove the ROLL ASSY RETARD by pushing down the HOLDER RETARD.



Removal

1) Pull out the 550 PAPER CASSETTE from the printer.
2) Release the hooks securing the HOLDER RETARD (PL4.1.5) to the 550 PAPER CASSETTE using a screwdriver or the like.
3) Lift up the HOLDER RETARD in the direction of the arrow, and remove it.
4) Release the hook securing the ROLL ASSY RETARD, and pull it out from the SHAFT RETARD (PL4.1.4).

NOTE **When removing, do not hold the rubber rollers of the ROLL ASSY RETARD.**

NOTE **When removing HOLDER RETARD, be careful not to lose SPRING RETARD.**

Replacement

1) Install the ROLL ASSY RETARD to the SHFT RETARD (PL4.1.4), and secure the ROLL ASSY RETARD with the hook.

NOTE **When installing, do not hold the rubber rollers of the ROLL ASSY RETARD.**

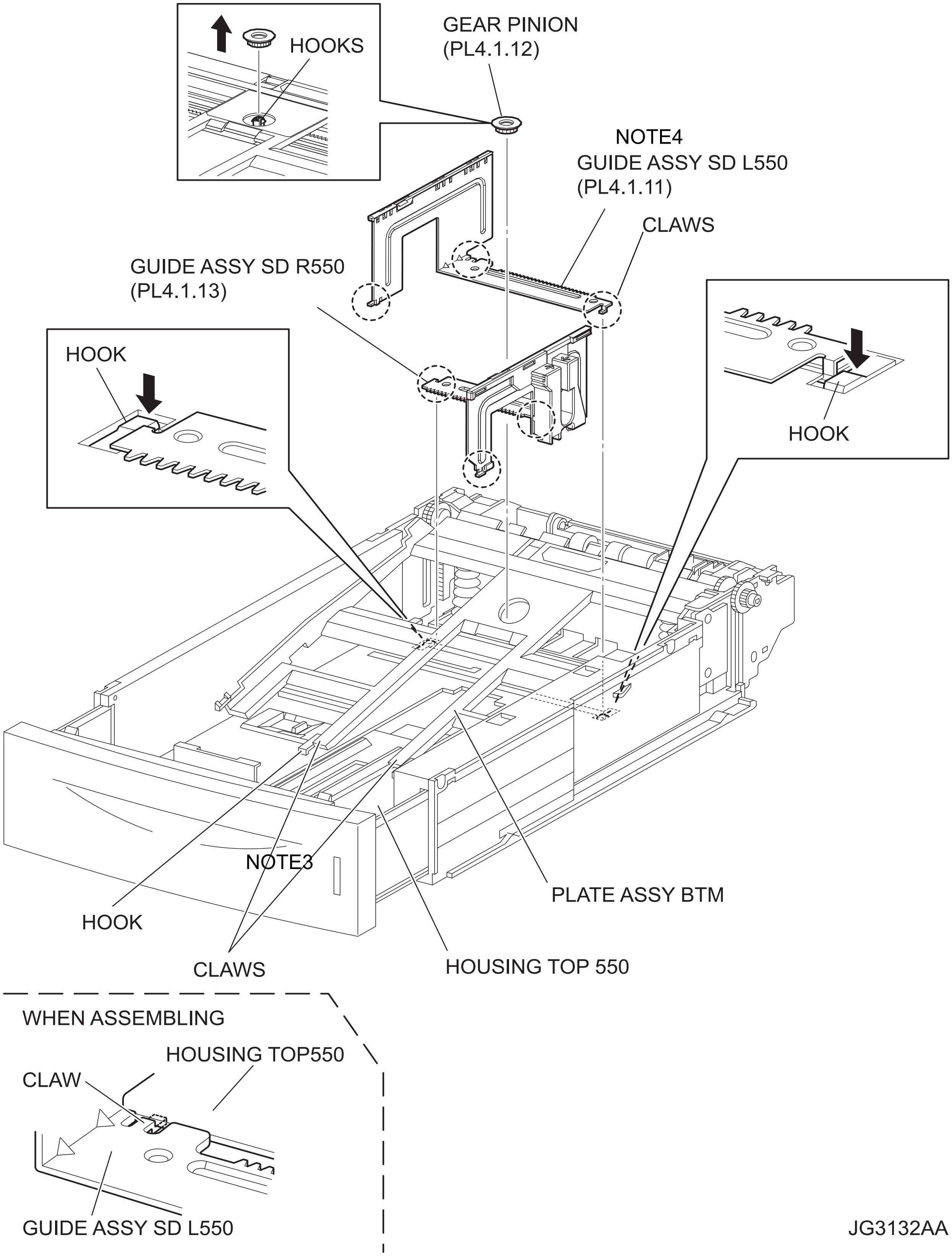
NOTE **Be sure to install the hook of the ROLL ASSY RETARD into the groove of the SHAFT RETARD.**

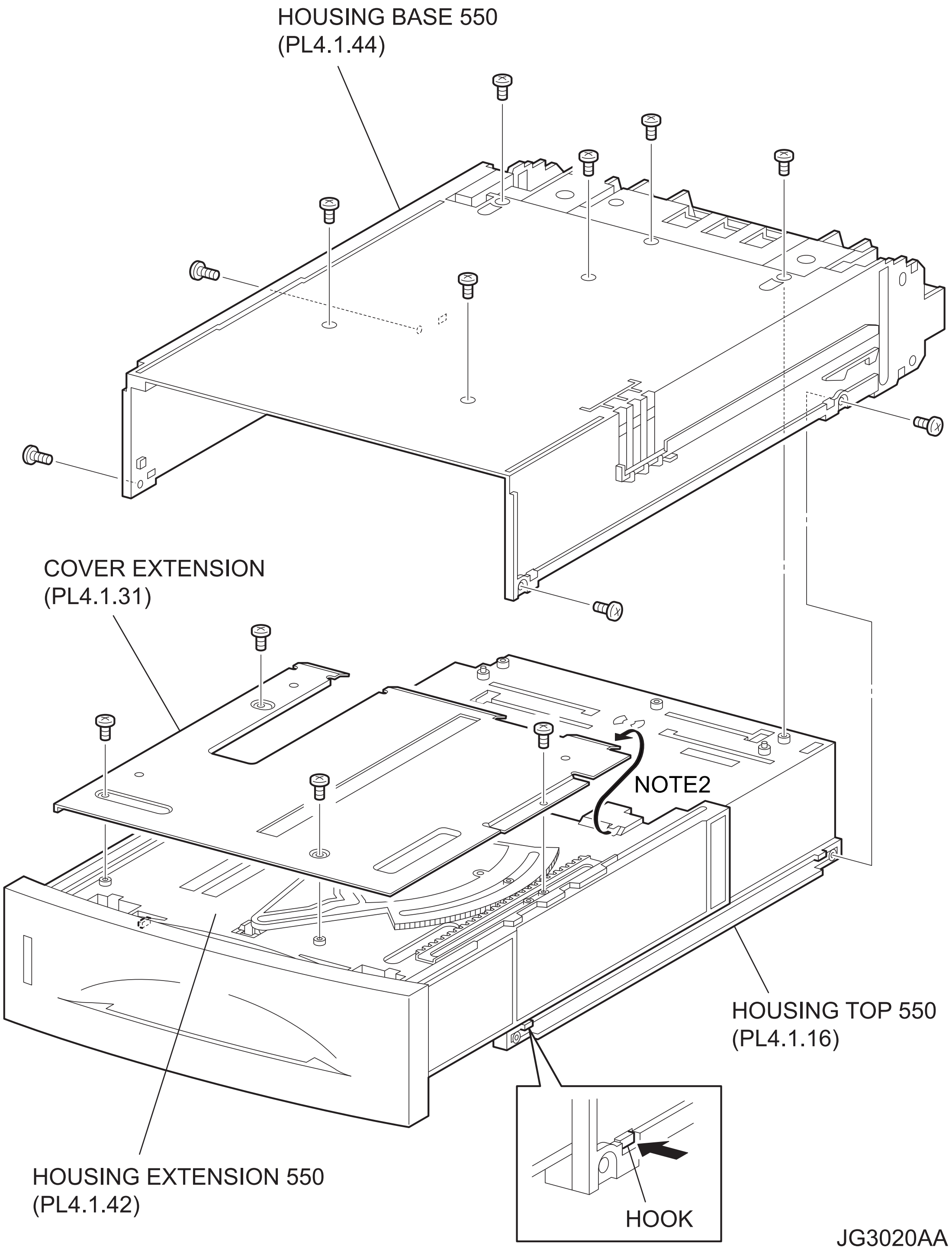
2) Move the HOLDER RETARD (PL4.1.5) in the opposite direction of the arrow, and install it to the 550 PAPER CASSETTE.

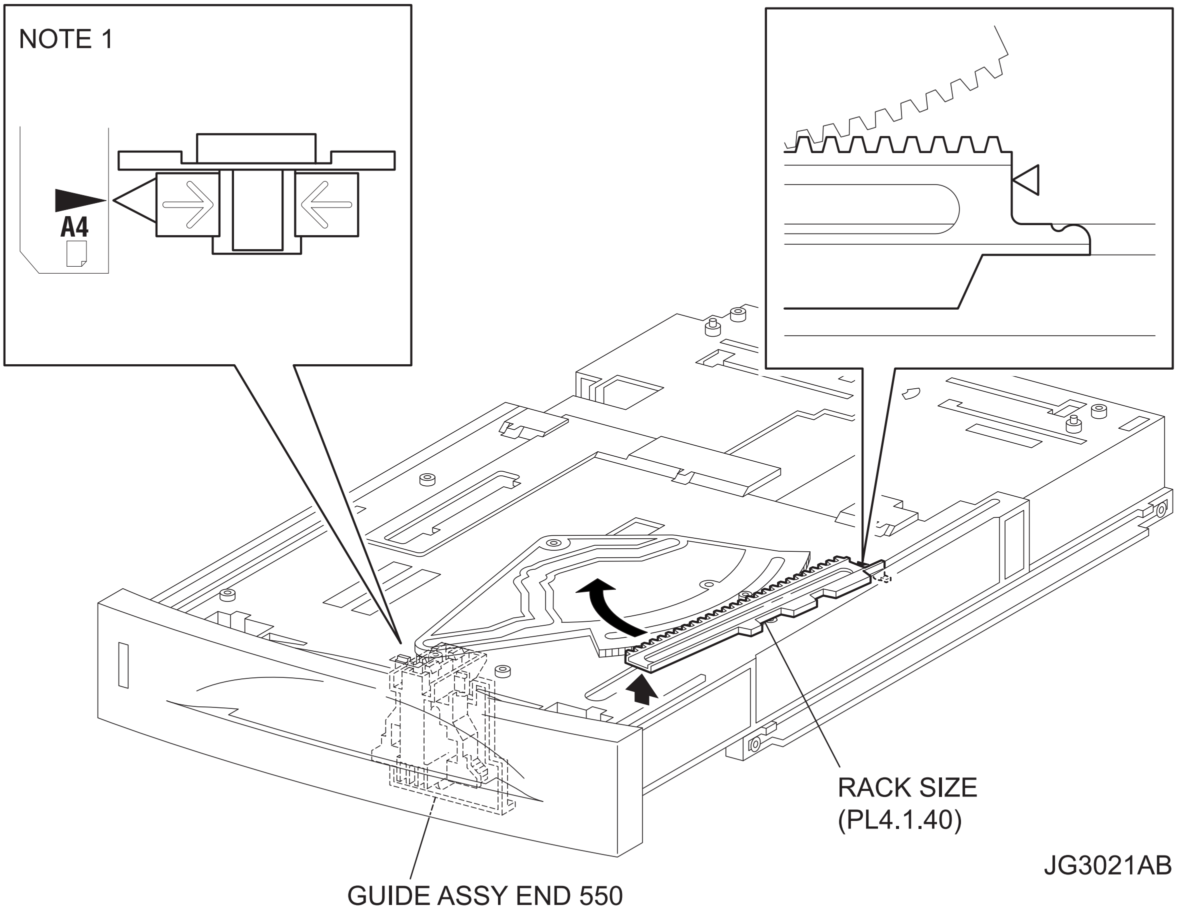
NOTE **After installing, make sure the HOLDER RETARD comes back to the former position with the spring force of the SPRING RETARD (PL4.1.6), when pushing down the HOLDER RETARD and then release the finger from it.**

3) Install the 550 PAPER CASSETTE to the printer.

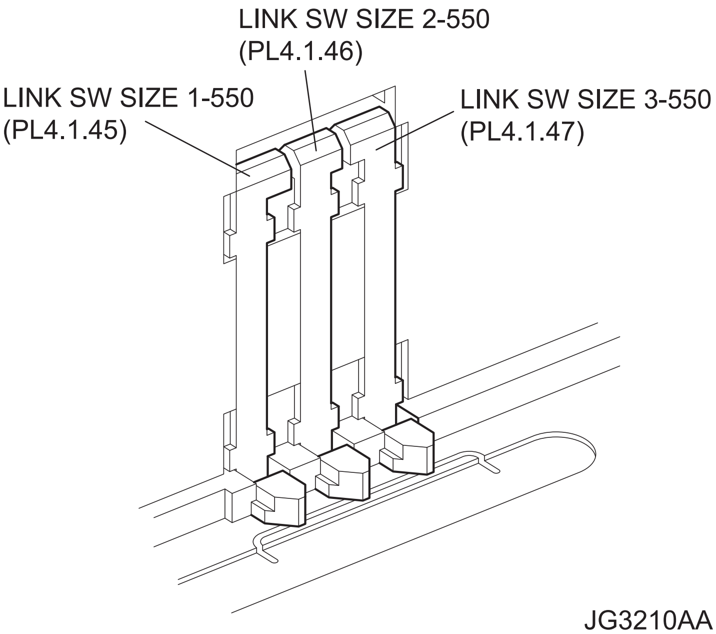
RRP4.2 RACK SIZE (PL4.1.40)


HOOKS
GEAR PINION
(PL4.1.12)
NOTE4
GUIDE ASSY SD L550
(PL4.1.11)
CLAWS
GUIDE ASSY SD R550
(PL4.1.13)
HOOK
HOOK
NOTE3
PLATE ASSY BTM
HOOK
CLAWS
HOUSING TOP 550
WHEN ASSEMBLING
HOUSING TOP550
CLAW
GUIDE ASSY SD L550
JG3132AA


HOUSING BASE 550
(PL4.1.44)
COVER EXTENSION
(PL4.1.31)
NOTE2
HOUSING TOP 550
(PL4.1.16)
HOUSING EXTENSION 550
(PL4.1.42)
HOOK
JG3020AA


NOTE 1
A4
RACK SIZE
(PL4.1.40)
GUIDE ASSY END 550

JG3021AB


LINK SW SIZE 2-550
(PL4.1.46)
LINK SW SIZE 1-550
(PL4.1.45)
LINK SW SIZE 3-550
(PL4.1.47)

JG3210AA

Removal

1) Remove the COVER CST (PL4.1.1) from the 550 PAPER CASSETTE.
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL4.1.12) to the HOUSING TOP 550 (PL4.1.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL4.1.29), release the lock of the LEVER BTM LOCK (PL4.1.27) to lift up the PLATE ASSY BTM. (Figure 4.5)
5) Slide the GUIDE ASSY SD L550 (PL4.1.11) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
6) Slide the GUIDE ASSY SD R550 (PL4.1.13) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
7) Remove the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back, that secure the HOUSING TOP 550 to the HOUSING BASE 550 (PL4.1.44).
8) Release the 4 hooks of the HOUSING TOP 550, and remove the HOUSING TOP 550 together with the HOUSING EXTENSION 550 (PL4.1.42), from the HOUSING BASE 550.
9) Remove the 4 screws (gold tapping, 6mm) securing the COVER EXTENSION (PL4.1.31) to the HOUSING EXTENSION 550.
10) Remove the COVER EXTENSION from the HOUSING EXTENSION 550.
11) Lift the front of the RACK SIZE (PL4.1.40) a little, and turn it in the direction of the arrow to remove it from the HOUSING EXTENSION 550.

Replacement

1) Put the hook of the top of the RACK SIZE into the groove of the HOUSING EXTENSION 550 (PL4.1.42), and turn it in the opposite direction of the arrow.
2) Align the end of the RACK SIZE with the triangle mark printed on the HOUSING EXTENSION 550 as shown in the figure, and install the RACK SIZE to the HOUSING EXTENSION 550.

NOTE **When installing the RACK SIZE, be sure to draw out the GUIDE ASSY END 550 (PL4.1.43) as far as it will go.(NOTE1).**

NOTE **Use 6mm size of fixed screw. If 8mm size of screw is used, HOUSING EXTENSION 550 doesn't operate smoothly and LOCK EXTENSION 550 doesn't operate correctly.**

3) Install the COVER EXTENSION (PL4.1.31) to the HOUSING EXTENSION 550 using the 4 screws (gold tapping, 6mm).

NOTE **When installing, make sure the COVER EXTENSION is inserted under 3 claws of the HOUSING EXTENSION 550.(NOTE2).**

4) Install the HOUSING EXTENSION 550 and HOUSING TOP 550 (PL4.1.16) to the HOUSING BASE 550 while pushing the LINK SW SIZE1-550 (PL4.1.37), LINK SW SIZE2-550 (PL4.1.38) and LINK SW SIZE3-550 (PL4.1.39) of the HOUSING BASE 550 outward as shown in the figure.

NOTE **Be sure to put 2 claws that on the top of the PLATE ASSY BTM under the hooks on the HOUSING TOP 550.(NOTE3).**

5) After assembling the HOUSING TOP 550 to the HOUSING BASE 550 using the 4 hooks, secure them using the 2 screws (gold tapping, 8mm) on both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back.

NOTE **After tightening the screws, move the GUIDE ASSY END 550 back and forth, and make sure that the LINK SW SIZEs operate smoothly.**

6) Insert the link lever of the GUIDE INDICATOR1 (PL4.1.34) into the hole of the PLATE ASSY BTM. (Figure 4.8)

7) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD R550 (PL4.1.13) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R550 sit correctly in the grooves of the HOUSING TOP 550.(NOTE4).**

8) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD L550 (PL4.1.11) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L550 sit correctly in the grooves of the HOUSING TOP 550.(NOTE4).**

9) Push the PLATE ASSY BTM downward to lock.

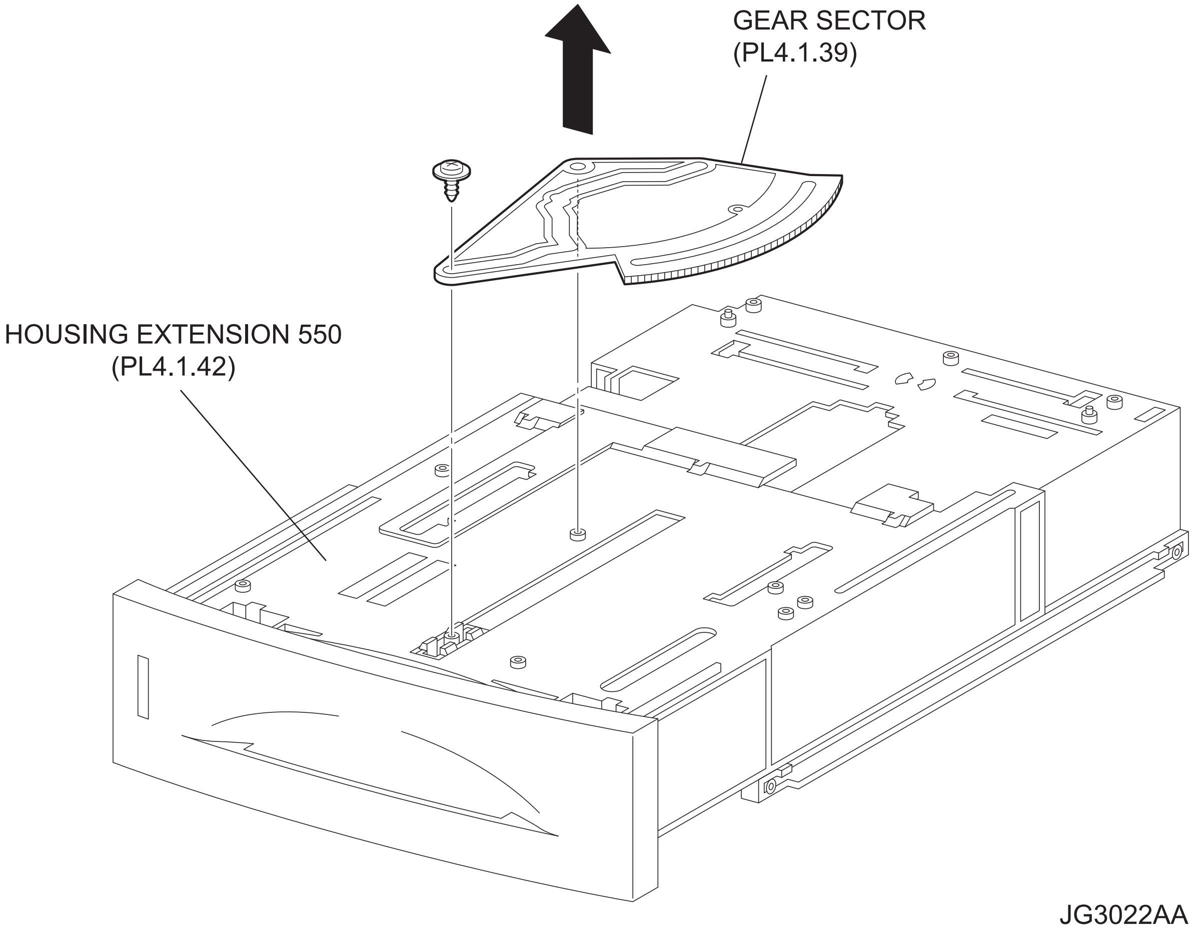
10) With completely opened GUIDE ASSY SD L550 (PL4.1.11) and GUIDE ASSY SD R550 (PL4.1.13) to the both sides,install the GEAR PINION (PL4.1.12) to the HOUSING TOP 550.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R550 and GUIDE ASSY SD L550 are completely opened. If not, the side register may be misaligned.**

11) Install the COVER CST (PL4.1.1) to the 550 PAPER CASSETTE.

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM.**

RRP4.3 GEAR SECTOR (PL4.1.39)



Removal

1) Remove the COVER CST (PL4.1.1) from the 550 PAPER CASSETTE.
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL4.1.12) to the HOUSING TOP 550 (PL4.1.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL4.1.29), release the lock of the LEVER BTM LOCK (PL4.1.27) to lift up the PLATE ASSY BTM. (Figure 4.5)
5) Slide the GUIDE ASSY SD L550 (PL4.1.11) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
6) Slide the GUIDE ASSY SD R550 (PL4.1.13) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
7) Remove the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back, that secure the HOUSING TOP 550 to the HOUSING BASE 550 (PL4.1.44).

8) Release the 4 hooks of the HOUSING TOP 550, and remove the HOUSING TOP 550 together with the HOUSING EXTENSION 550 (PL4.1.42) from the HOUSING BASE 550.
9) Remove the 4 screws (gold tapping, 6mm) securing the COVER EXTENSION (PL4.1.31) to the HOUSING EXTENSION 550.
10) Remove the COVER EXTENSION from the HOUSING EXTENSION 550.
11) Remove the RACK SIZE (PL4.1.40). (RRP4.2)
12) Remove the screw (black with flange, 8mm) securing the GEAR SECTOR.
13) Remove the GEAR SECTOR from the HOUSING EXTENSION 550 (PL4.1.42).

Replacement

1) Install the GEAR SECTOR to the HOUSING EXTENSION 550 (PL4.1.42).
2) Secure the GEAR SECTOR using the screw (black with flange, 8mm).
3) Install the RACK SIZE (PL4.1.40). (RRP4.2)
4) Install the COVER EXTENSION (PL4.1.31) to the HOUSING EXTENSION 550 using the 4 screws (gold tapping, 6mm).

NOTE **When installing, make sure the COVER EXTENSION is inserted under 3 claws of the HOUSING EXTENSION 550.**

5) Install the HOUSING EXTENSION 550 and HOUSING TOP 550 (PL4.1.16) to the HOUSING BASE 550 while pushing the LINK SW SIZE1-550 (PL4.1.37), LINK SW SIZE2-550 (PL4.1.38) and LINK SW SIZE3-550 (PL4.1.39) of the HOUSING BASE 550 outward as shown in the figure. (Figure 4.2)

NOTE **Be sure to put 2 claws that on the top of the PLATE ASSY BTM under the hooks on the HOUSING TOP 550.**

NOTE **Use 6mm size of fixed screw. If 8mm size of screw is used, HOUSING EXTENSION 550 doesn't operate smoothly and LOCK EXTENSION 550 doesn't operate correctly.**

6) After assembling the HOUSING TOP 550 to the HOUSING BASE 550 using the 4 hooks, secure them using the 2 screws (gold tapping, 8mm) on both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back.

NOTE **After tightening the screws, move the GUIDE ASSY END 550 back and forth, and make sure that the LINK SW SIZEs operate smoothly.**

7) Insert the link lever of the GUIDE INDICATOR1 (PL4.1.34) into the hole of the PLATE ASSY BTM. (Figure 4.8)
8) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD R550 (PL4.1.13) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R550 sit correctly in the grooves of the HOUSING TOP 550.**

9) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD L550 (PL4.1.11) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L550 sit correctly in the grooves of the HOUSING TOP 550.**

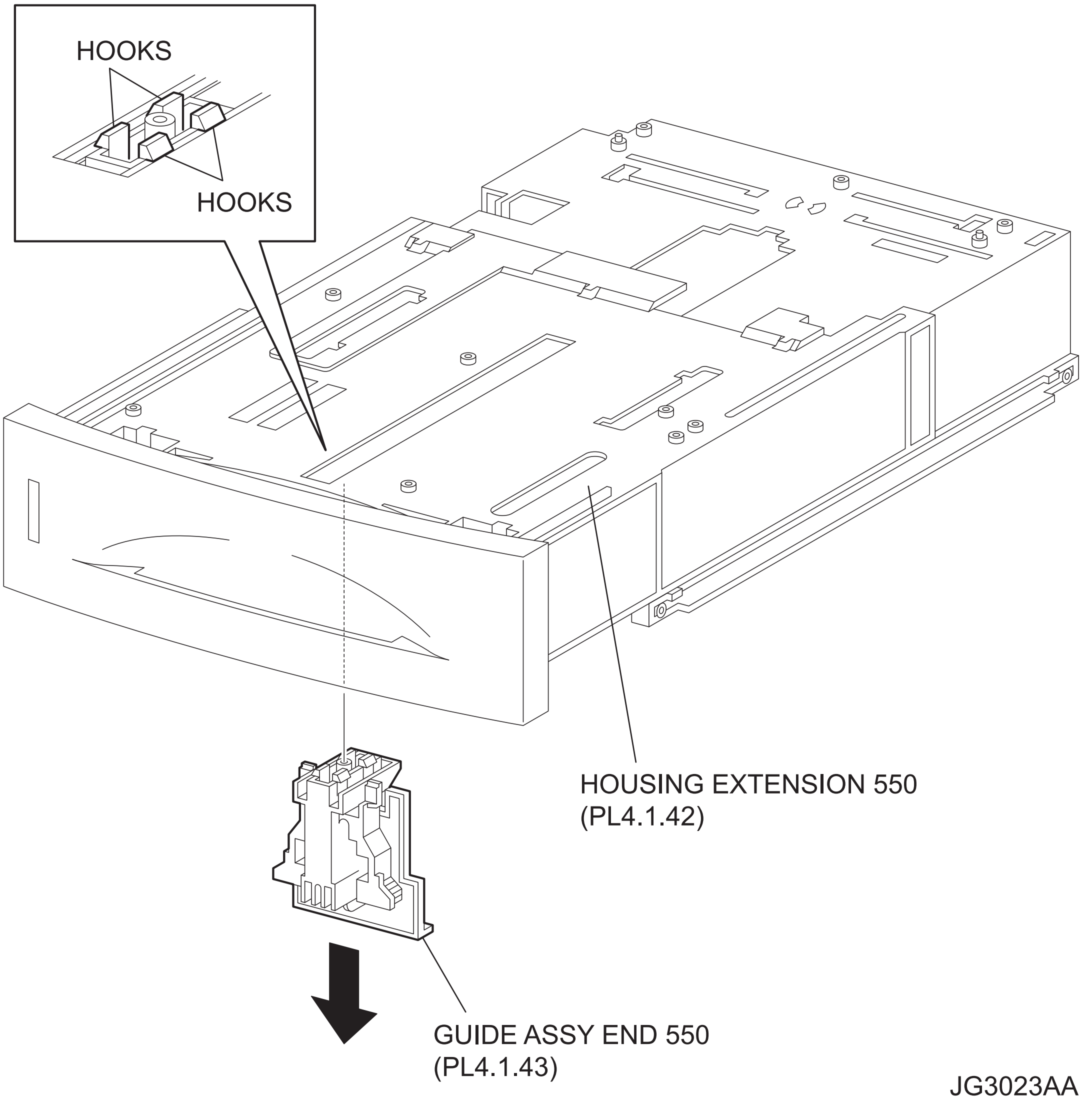
10) Push the PLATE ASSY BTM downward to lock.
11) With completely opened GUIDE ASSY SD L550 (PL4.1.11) and GUIDE ASSY SD R550 (PL4.1.13) to the both sides, install the GEAR PINION (PL4.1.12) to the HOUSING TOP 550.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R550 and GUIDE ASSY SD L550 are completely opened. If not, the side register may be misaligned.**

12) Install the COVER CST (PL4.1.1) to the 550 PAPER CASSETTE.

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM.**

RRP4.4 GUIDE ASSY END 550 (PL4.1.43)



Removal

1) Remove the COVER CST (PL4.1.1) from the 550 PAPER CASSETTE.
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL4.1.12) to the HOUSING TOP 550 (PL4.1.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL4.1.29), release the lock of the LEVER BTM LOCK (PL4.1.27) to lift up the PLATE ASSY BTM. (Figure 4.5)
5) Slide the GUIDE ASSY SD L550 (PL4.1.11) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
6) Slide the GUIDE ASSY SD R550 (PL4.1.13) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.

7) Remove the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back, that secure the HOUSING TOP 550 to the HOUSING BASE 550 (PL4.1.44).
8) Release the 4 hooks of the HOUSING TOP 550, and remove the HOUSING TOP 550 together with the HOUSING EXTENSION 550 (PL4.1.42) from the HOUSING BASE 550.
9) Remove the 4 screws (gold tapping, 6mm) securing the COVER EXTENSION (PL4.1.31) to the HOUSING EXTENSION 550.
10) Remove the COVER EXTENSION from the HOUSING EXTENSION 550.
11) Remove the RACK SIZE (PL4.1.40). (RRP4.2)
12) Remove the GEAR SECTOR (PL4.1.39) (RRP4.3)
13) Release the hooks securing the GUIDE ASSY END 550 to the HOUSING EXTENSION 550 (PL4.1.42).

NOTE **Be careful handling the hooks of the GUIDE ASSY END 550. They are fragile and could break if given excessive force.**

14) Remove the GUIDE ASSY END 550 from the HOUSING EXTENSION 550.

Replacement

1) Secure the GUIDE ASSY END 550 to the HOUSING EXTENSION 550 (PL4.1.42) using the 4 hooks.
2) Install the GEAR SECTOR (PL4.1.39). (RRP4.3)
3) Install the RACK SIZE (PL4.1.40). (RRP4.2)
4) Install the COVER EXTENSION (PL4.1.31) to the HOUSING EXTENSION 550 using the 4 screws (gold tapping, 6mm).

NOTE **When installing, make sure the COVER EXTENSION is inserted under 3 claws of the HOUSING EXTENSION 550.**

NOTE **Use 6mm size of fixed screw. If 8mm size of screw is used, HOUSING EXTENSION 550 doesn't operate smoothly and LOCK EXTENSION 550 doesn't operate correctly.**

5) Install the HOUSING EXTENSION 550 and HOUSING TOP 550 (PL4.1.16) to the HOUSING BASE 550 while pushing the LINK SW SIZE1-550 (PL4.1.37), LINK SW SIZE2-550 (PL4.1.38) and LINK SW SIZE3-550 (PL4.1.39) of the HOUSING BASE 550 outward as shown in the figure. (Figure 4.2)

NOTE **Be sure to put 2 claws that on the top of the PLATE ASSY BTM under the hooks on the HOUSING TOP 550.**

6) After assembling the HOUSING TOP 550 to the HOUSING BASE 550 using the 4 hooks, secure them using the 2 screws (gold tapping, 8mm) on both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back.

NOTE **After tightening the screws, move the GUIDE ASSY END 550 back and forth, and make sure that the LINK SW SIZEs operate smoothly.**

7) Insert the link lever of the GUIDE INDICATOR1 (PL4.1.34) into the hole of the PLATE ASSY BTM. (Figure 4.8)
8) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD R550 (PL4.1.13) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R550 sit correctly in the grooves of the HOUSING TOP 550.**

9) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD L550 (PL4.1.11) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L550 sit correctly in the grooves of the HOUSING TOP 550.**

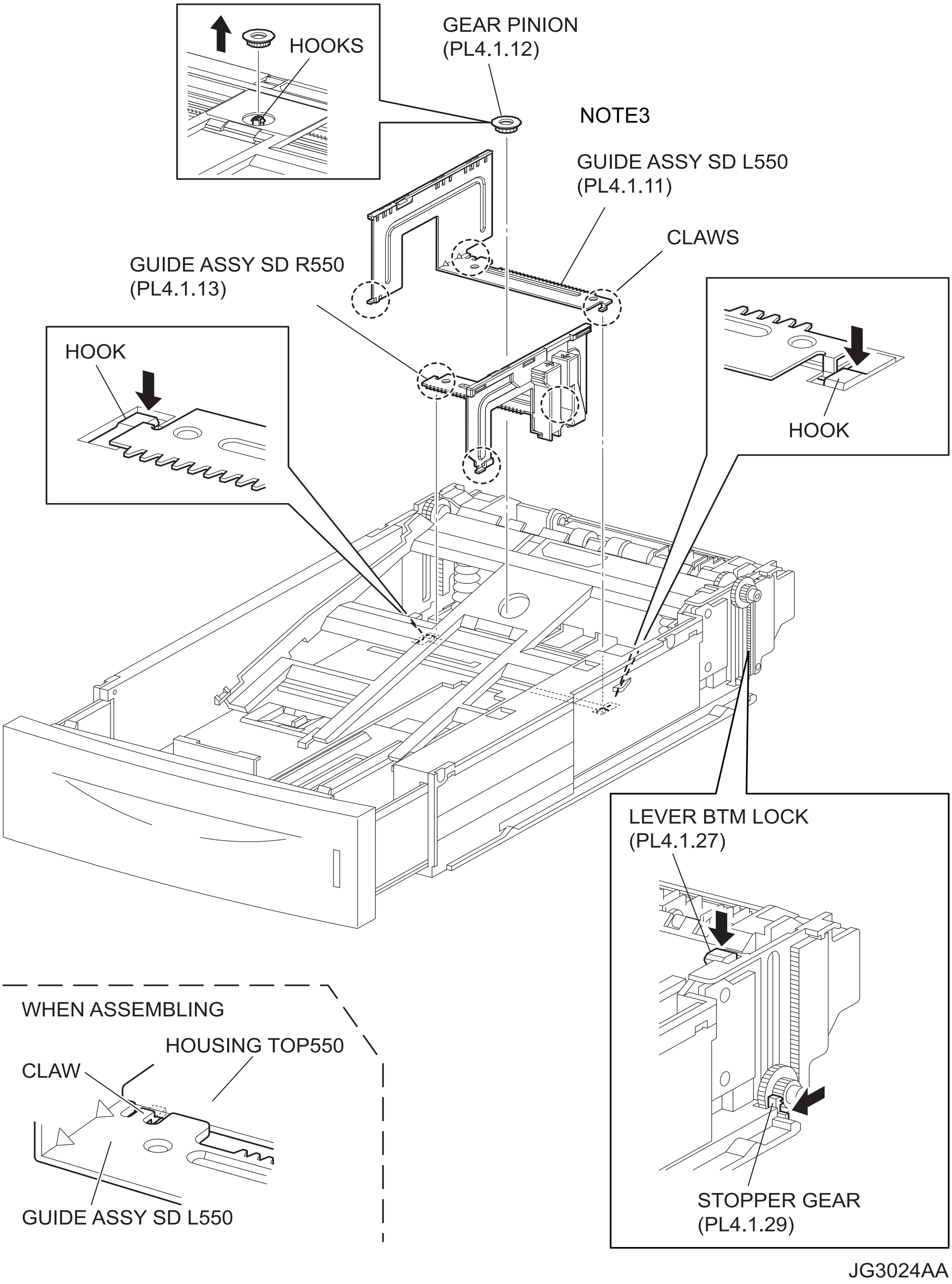
10) Push the PLATE ASSY BTM downward to lock.
11) With completely opened GUIDE ASSY SD L550 (PL4.1.11) and GUIDE ASSY SD R550 (PL4.1.13) to the both sides,install the GEAR PINION (PL4.1.12) to the HOUSING TOP 550.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R550 and GUIDE ASSY SD L550 are completely opened. If not, the side register may be misaligned.**

12) Install the COVER CST (PL4.1.1) to the 550 PAPER CASSETTE.

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM.**

RRP4.5 PLATE ASSY BTM (PL4.1.10)


HOOKS
GEAR PINION
(PL4.1.12)
NOTE3
GUIDE ASSY SD L550
(PL4.1.11)
CLAWS
GUIDE ASSY SD R550
(PL4.1.13)
HOOK
HOOK
LEVER BTM LOCK
(PL4.1.27)
STOPPER GEAR
(PL4.1.29)
WHEN ASSEMBLING
HOUSING TOP550
CLAW
GUIDE ASSY SD L550
JG3024AA

Removal

1) Remove the COVER CST (PL4.1.1) from the 550 PAPER CASSETTE.
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL4.1.12) to the HOUSING TOP 550 (PL4.1.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL4.1.29), release the lock of the LEVER BTM LOCK (PL4.1.27) to lift up the PLATE ASSY BTM.
5) Slide the GUIDE ASSY SD L550 (PL4.1.11) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
6) Slide the GUIDE ASSY SD R550 (PL4.1.13) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.

NOTE **In the following steps, the GEAR PB L (PL4.1.7), GEAR BTM DMP ONEWAY (PL4.1.8) and GEAR BTM LOCK ONEWAY (PL4.1.15) will be detached. Be careful not to lose these gears.**

7) Release the hook of the GEAR PB R (PL4.1.20), and remove the GEAR PB R from the SHAFT PB (PL4.1.9).

NOTE **It is hard to remove GEAR PB R. When removing it, be careful not to break it.**

8) Disengage the GEAR PB L from the PLATE GEAR LOCK 550 while bending the HOUSING BASE 550 in the direction of the arrows. Remove the PLATE ASSY BTM together with the SHAFT PB, GEAR PB L, GEAR BTM DMP ONEWAY, and GEAR BTM LOCK ONEWAY from the HOUSING TOP 550.
9) Pull out the SHAFT PB from the PLATE ASSY BTM, and remove the GEAR PB L, GEAR BTM DMP ONEWAY and GEAR BTM LOCK ONEWAY.

Replacement

1) Insert the SHAFT PB (PL4.1.9) into the PLATE ASSY BTM, and insert the GEAR BTM DMP ONEWAY, GEAR PB L and GEAR BTM LOCK ONEWAY to the SHAFT PB.
2) While disengaging the GEAR PB L, install the assembled PLATE ASSY BTM to the HOUSING TOP 550 (PL4.1.16).

NOTE **When installing the PLATE ASSY BTM, be sure to put 2 SPRING BTM UP 550s (PL4.1.18) into the bosses on the back of the PLATE ASSY BTM.(NOTE1).**

NOTE **Be sure to put 2 claws that on the top of the PLATE ASSY BTM under the hooks on the HOUSING TOP 550.(NOTE2).**

3) Insert the link lever of the GUIDE INDICATOR1 (PL4.1.34) into the hole of the PLATE ASSY BTM. (Figure 4.8)

4) Install the GEAR PB R (PL4.1.20) to the SHAFT PB (PL4.1.9), and secure it with the hook.

NOTE **Be sure to install the hook of the GEAR PB R into the groove of the SHAFT PB.**

NOTE **When installing the PLATE GEAR LOCK 550, be sure to lift up the PLATE ASSY BTM. If the PLATE ASSY BTM is inclined, a paper skew or jam may occur. Check after the installation is completed.**

5) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD R550 (PL4.1.13) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R550 sit correctly in the grooves of the HOUSING TOP 550.(NOTE3).**

6) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD L550 (PL4.1.11) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L550 sit correctly in the grooves of the HOUSING TOP 550.**

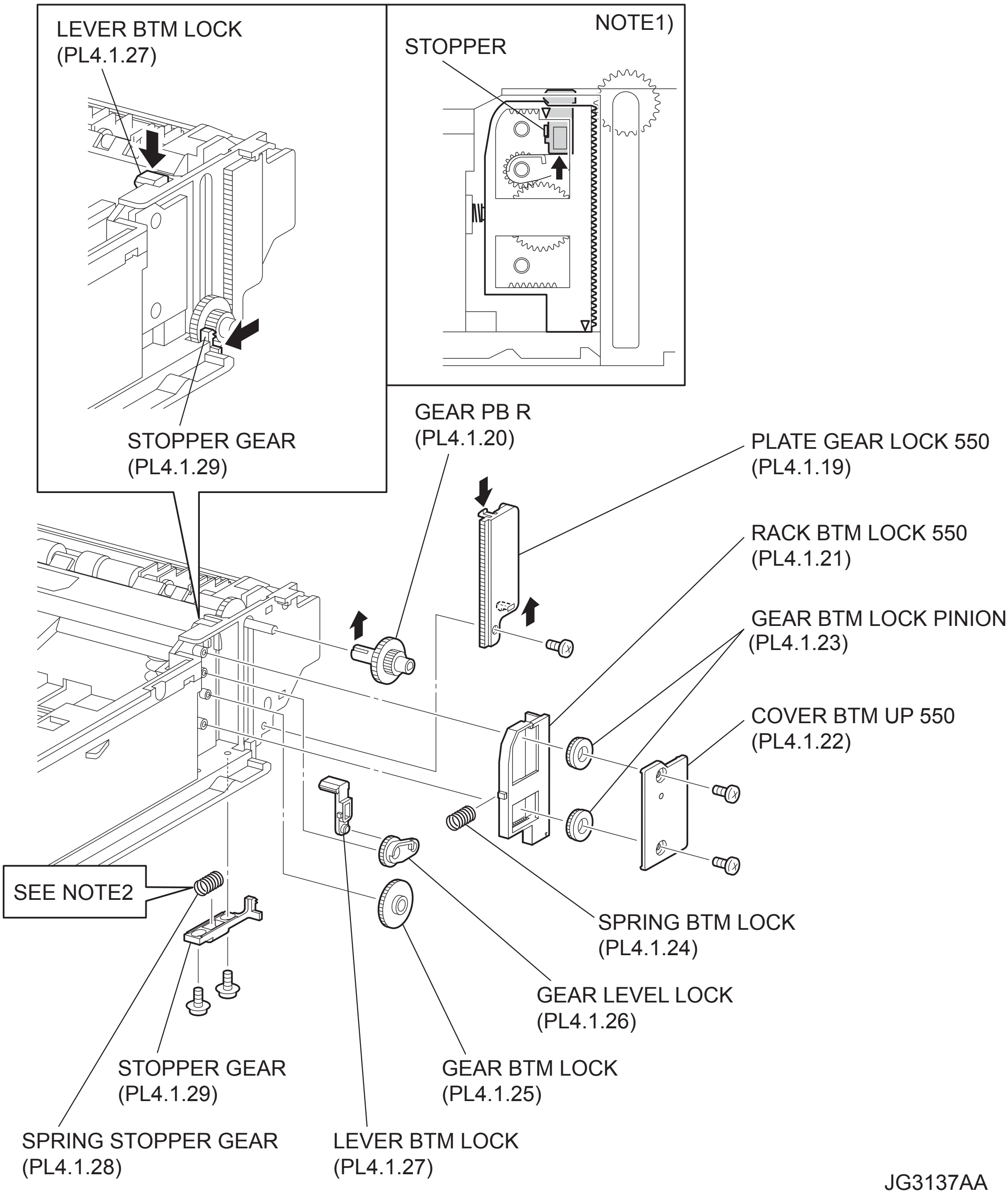
7) Push the PLATE ASSY BTM downward to lock.
8) Install the GEAR PINION (PL4.1.12) to the HOUSING TOP 550.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R550 and GUIDE ASSY SD L550 are completely opened. If not, the side register may be misaligned.**

9) Install the COVER CST (PL4.1.1) to the 550 PAPER CASSETTE.

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM.**

RRP4.6 GEAR LEVER LOCK (PL4.1.26), LEVER BTM LOCK (PL4.1.27)


LEVER BTM LOCK
(PL4.1.27)
STOPPER GEAR
(PL4.1.29)
NOTE1)
STOPPER
GEAR PB R
(PL4.1.20)
PLATE GEAR LOCK 550
(PL4.1.19)
RACK BTM LOCK 550
(PL4.1.21)
GEAR BTM LOCK PINION
(PL4.1.23)
COVER BTM UP 550
(PL4.1.22)
SEE NOTE2
SPRING BTM LOCK
(PL4.1.24)
GEAR LEVEL LOCK
(PL4.1.26)
STOPPER GEAR
(PL4.1.29)
GEAR BTM LOCK
(PL4.1.25)
SPRING STOPPER GEAR
(PL4.1.28)
LEVER BTM LOCK
(PL4.1.27)
JG3137AA

Removal

1) Remove the COVER CST (PL4.1.1) from the 550 PAPER CASSETTE.
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.

3) While pressing down the lock of the STOPPER GEAR (PL4.1.29), release the lock of LEVER BTM LOCK (PL4.1.27) to lift up the PLATE ASSY BTM (PL4.1.10).
4) Remove the screw (gold tapping, 8mm) securing the PLATE GEAR LOCK 550 (PL4.1.19) at the GEAR PB R (PL4.1.20) side.
5) Release the hook of the PLATE GEAR LOCK 550, and remove it from the HOUSING BASE 550 (PL4.1.44).
6) Release the hook of the GEAR PB R, and remove the GEAR PB R from the SHAFT PB (PL4.1.9).
7) Remove the 2 screws (gold tapping, 6mm) securing the COVER BTM UP 550 (PL4.1.22), and remove it from the HOUSING BASE 550.
8) Remove 2 GEAR LOCK PINIONs (PL4.1.23) from the HOUSING BASE 550.
9) Remove the RACK BTM LOCK 550 (PL4.1.21) together with the SPRING BTM LOCK (PL4.1.24) from the HOUSING BASE 550.
10) Remove the GEAR BTM LOCK (PL 4.1.25) from the HOUSING BASE 550.
11) Remove the GEAR LEVER LOCK from the HOUSING BASE 550.
12) Remove the 2 screws (gold tapping, 6mm) securing the STOPPER GEAR (PL4.1.29), and remove the STOPPER GEAR and SPRING STOPPER GEAR (PL4.1.28) from the HOUSING BASE 550.

NOTE **When removing the STOPPER GEAR, be careful not to lose the SPRING STOPPER GEAR.**

Replacement

NOTE **When installing, be sure to lift up the PLATE ASSY BTM. If the PLATE ASSY BTM is inclined, a paper skew or jam may occur. Check after the installation is completed.**

1) Put the SPRING STOPPER GEAR (PL4.1.28) into the STOPPER GEAR (PL4.1.29), and secure the STOPPER GEAR to the HOUSING BASE 550 (PL4.1.44) using the 2 screws (gold tapping, 6mm).

NOTE **When installing the STOPPER GEAR, be careful not to lose the SPRING STOPPER GEAR.**

NOTE **Install the STOPPER GEAR so that one end of the SPRING STOPPER GEAR is in contact with the plate located on the back of the HOUSING BASE 550 as shown in the figure. (Refer to NOTE 2.)**

2) Install the GEAR LEVER LOCK to the HOUSING BASE 550.
3) Install the GEAR BTM LOCK (PL4.1.25) to the HOUSING BASE 550.
4) Install the SPRING BTM LOCK (PL4.1.24) to the projection of the RACK BTM LOCK 550 (PL4.1.21), and install them to the HOUSING BASE 550.

NOTE **When installing the RACK BTM LOCK 550, be sure to install it with the LEVER BTM LOCK lifted up. After installing, push down the LEVER BTM LOCK and then release the finger from it, check that the projection of the LEVER BTM LOCK is hit the stopper of the HOUSING BASE 550 and the triangle mark is placed above the stopper.**

5) Install 2 GEAR LOCK PINIONs (PL4.1.23) to the HOUSING BASE 550, and engage the gear.

NOTE **Install the lower GEAR BTM PINION after installing the upper GEAR BTM LOCK PINION. When installing the lower GEAR BTM PINION, press RACK BTM LOCK 550 in the direction of arrow until it bumps into the edge. (NOTE3)**

6) Secure the COVER BTM UP 550 (PL4.1.22) to the HOUSING BASE 550 using the screw (gold tapping, 6mm).

7) Install the GEAR PB R (PL4.1.20) to the SHAFT PB (PL4.1.9), and secure it with the hook.

NOTE **Be sure to install the hook of the GEAR PB R into the groove of the SHAFT PB.**

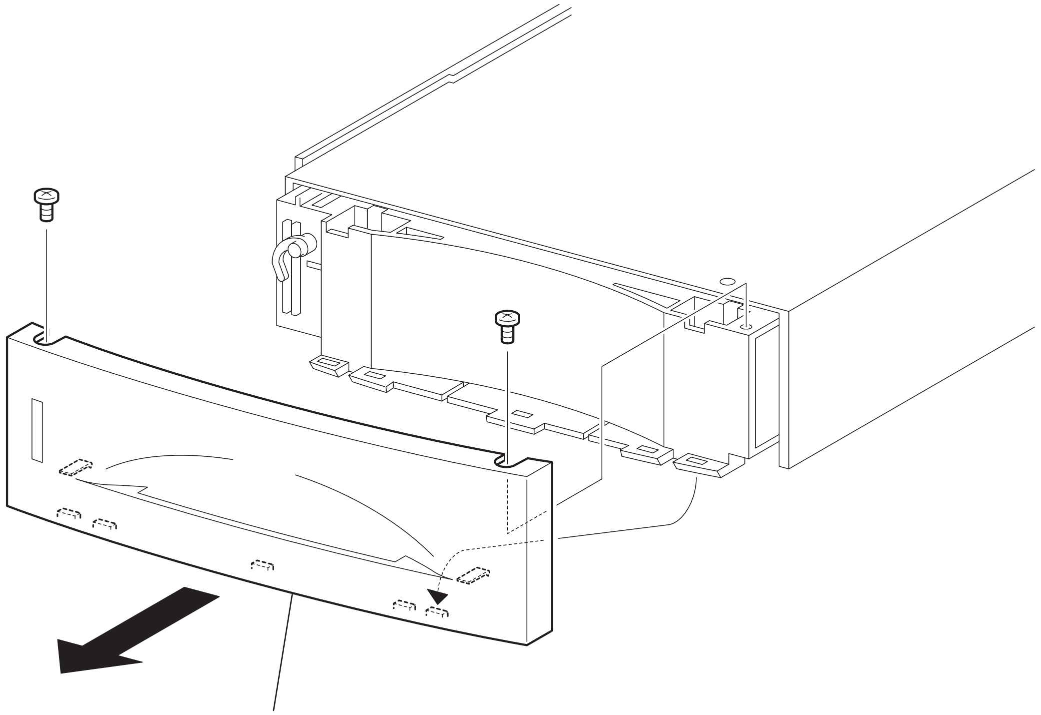
8) Install the PLATE GEAR LOCK 550 (PL4.1.19) to the HOUSING BASE 550, and secure it with the hook.

9) Secure the PLATE GEAR LOCK 550 using the screw (gold tapping, 8mm).

10) Push the PLATE ASSY BTM (PL4.1.10) downward to lock.

NOTE **Confirm that there is no space between RACK BTM LOCK 550 and HOUSING BASE 550 when pressing the center of RACK BTM LOCK 550 against HOUSING BASE 550.**

RRP4.7 HANDLE EXTENSION 550 (PL4.1.41)



Removal

1) Remove the COVER CST (PL4.1.1) from the 550 PAPER CASSETTE.
2) Remove the 2 screws on the back side of the HANDLE EXTENSION 550.
3) Release the 5 hooks at the upper side and 2 hooks at the lower side of the HANDLE EXTENSION 550, then, remove the HANDLE EXTENSION 550 from the HOUSING EXTENSION 550 (PL4.1.42).

NOTE **When removing the HANDLE EXTENSION 550, the LOW INDICATOR (PL4.1.37) and LOW IND FRONT (PL4.1.38) will be detached. Be careful not to lose them.**

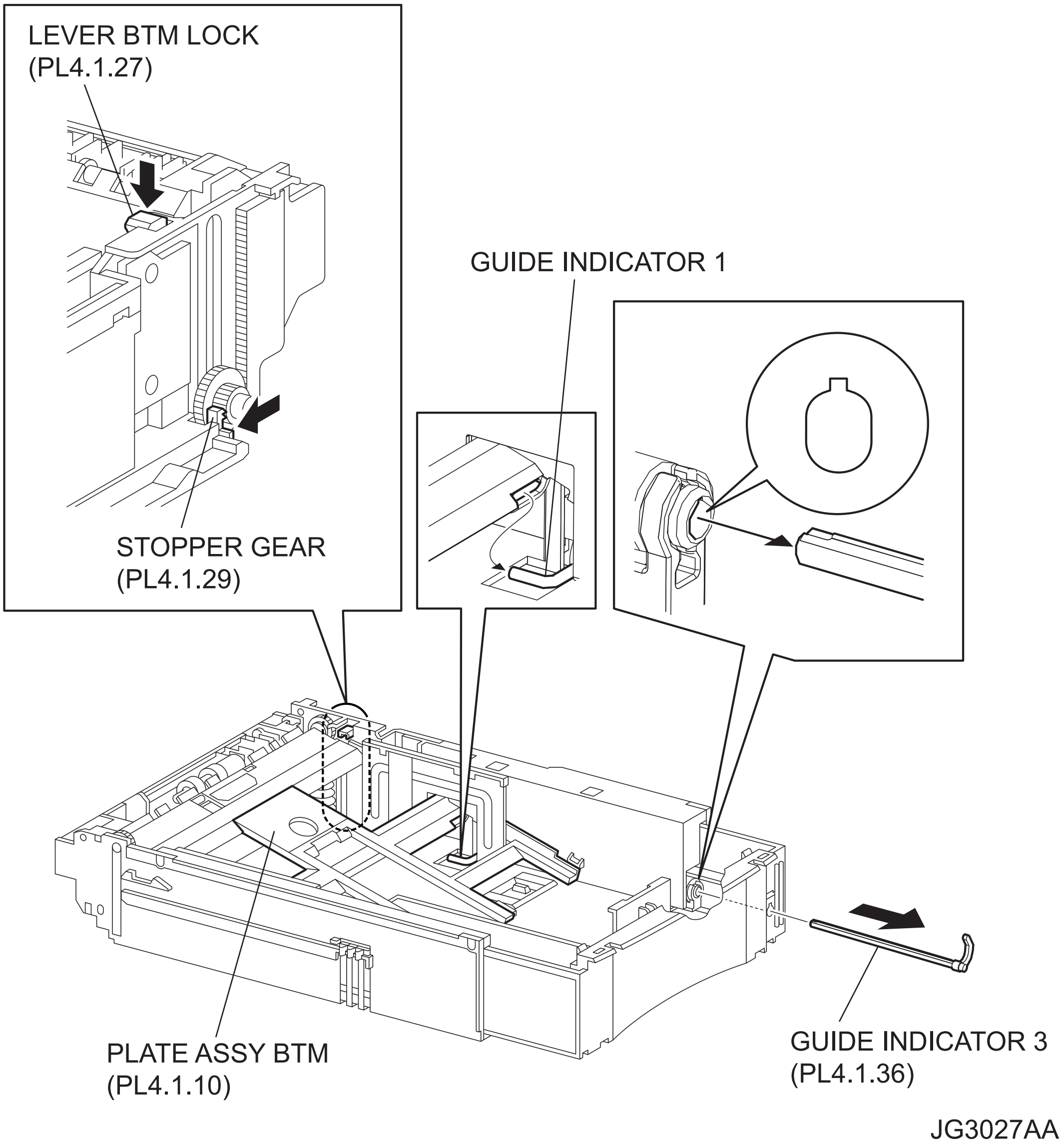
Replacement

1) Install the LOW INDICATOR (PL4.1.37) and LOW IND FRONT (PL4.1.38). (RRP4.10)
2) Put the 5 hooks on the top portion and 2 hooks on the lower side of the HANDLE EXTENSION 550 to the HOUSING EXTENSION 550 (PL4.1.42).
3) Secure the HANDLE EXTENSION 550 (PL4.1.41) to the HOUSING EXTENSION 550 using the 2 screws.
4) Install the COVER CST (PL4.1.1) to the 550 PAPER CASSETTE.

NOTE

After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM.

RRP4.8 GUIDE INDICATOR 3 (PL4.1.36)


LEVER BTM LOCK
(PL4.1.27)
STOPPER GEAR
(PL4.1.29)
GUIDE INDICATOR 1
PLATE ASSY BTM
(PL4.1.10)
GUIDE INDICATOR 3
(PL4.1.36)
JG3027AA

Removal

1) Remove the COVER CST (PL4.1.1) from the 550 PAPER CASSETTE.
2) Remove the HANDLE EXTENSION 550 (PL4.1.41). (RRP4.7)

NOTE **When removing the HANDLE EXTENSION 550, the LOW INDICATOR (PL4.1.37) and LOW IND FRONT (PL4.1.38) will be detached. Be careful not to lose them.**

3) While pressing down the lock of the STOPPER GEAR (PL4.1.29), release the lock of the LEVER BTM LOCK (PL4.1.27) to lift up the PLATE ASSY BTM (PL4.1.10).
4) Remove the link lever of the GUIDE INDICATOR 1 (PL4.1.34) from the hole of the PLATE ASSY BTM.

5) While pressing the link lever down to the bottom side of the 550 PAPER CASSETTE, slowly but firmly draw the GUIDE INDICATOR 3 out from the front side of the HOUSING EXTENSION 550 (PL4.1.42).

Replacement

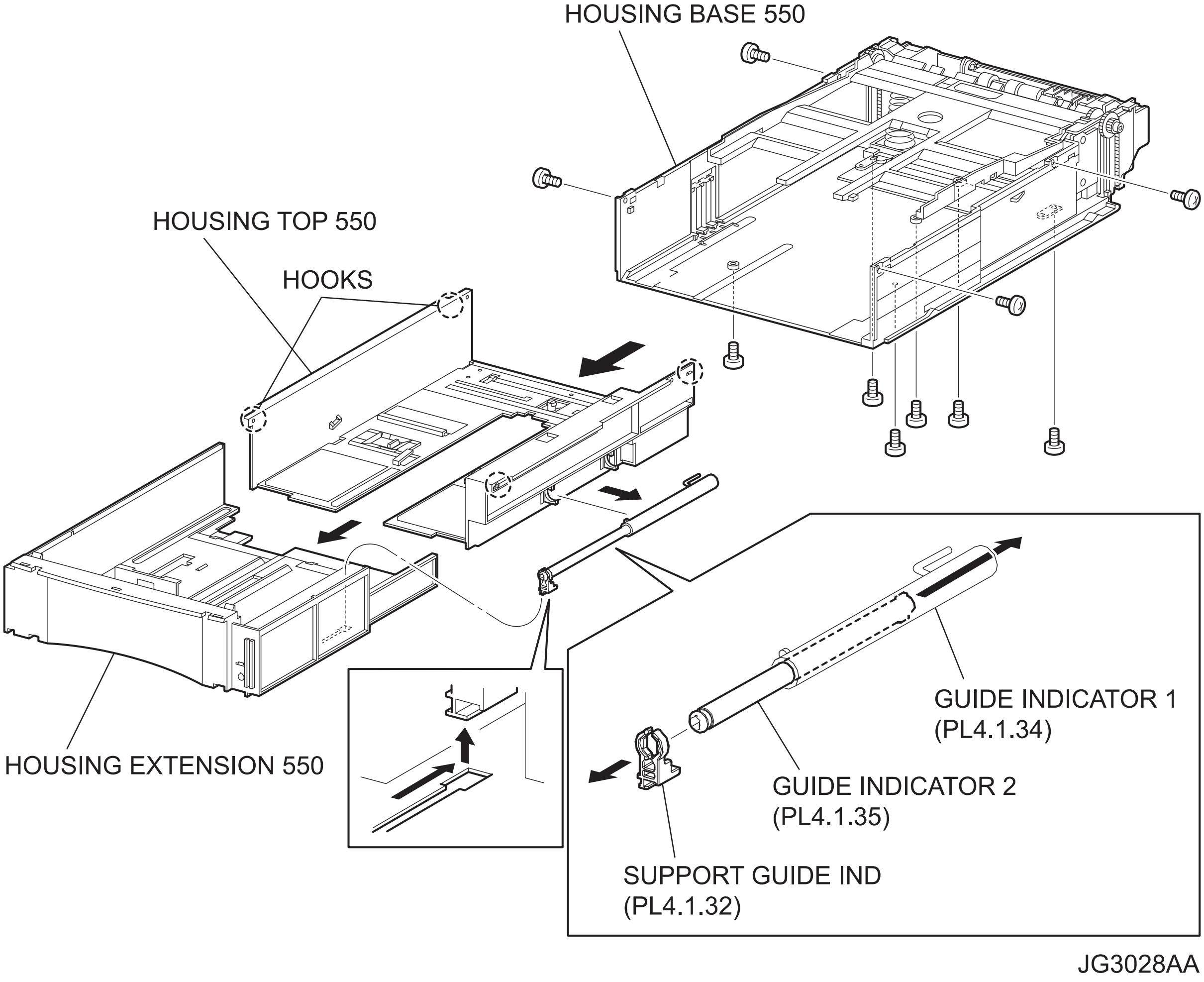
1) While pressing the link lever down to the bottom side of the 550 PAPER CASSETTE, insert the GUIDE INDICATOR 3 to the HOUSING EXTENSION 550 (PL4.1.42) from the front side.

NOTE **Be sure to align the groove of the GUIDE INDICATOR 1 and the projection of the GUIDE INDICATOR 3.**

2) Insert the link lever of the GUIDE INDICATOR 1 (PL4.1.34) to the hole of the PLATE ASSY BTM.
3) Install the LOW INDICATOR (PL4.1.37) and LOW IND FRONT (PL4.1.38). (RRP4.10)
4) Install the HANDLE EXTENSION 550 (PL4.1.41). (RRP4.7)
5) Install the COVER CST (PL4.1.1) to the 5550 PAPER CASSETTE.

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM**

RRP4.9 GUIDE INDICATOR 2 (PL4.1.35)


HOUSING BASE 550
HOUSING TOP 550
HOOKS
HOUSING EXTENSION 550
GUIDE INDICATOR 1
(PL4.1.34)
GUIDE INDICATOR 2
(PL4.1.35)
SUPPORT GUIDE IND
(PL4.1.32)
JG3028AA

Removal

1) Remove the COVER CST (PL4.1.1) from the 550 PAPERE CASSETTE.
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL4.1.12) to the HOUSING TOP 550 (PL4.1.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL4.1.29), release the lock of the LEVER BTM LOCK (PL4.1.27) to lift up the PLATE ASSY BTM. (Figure 4.5)
5) Slide the GUIDE ASSY SD L550 (PL4.1.11) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
6) Slide the GUIDE ASSY SD R550 (PL4.1.13) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
7) Remove the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back, that secure the HOUSING TOP 550 (PL4.1.16) to the HOUSING BASE 550 (PL4.1.44).

8) Turn the 550 PAPER CASSETTE over, and pull out the HOUSING TOP 550 frontward about 20 mm to release the claws that on the top of the PLATE ASSY BTM from the hooks of the HOUSING TOP 550.
9) Release the 4 hooks of the HOUSING TOP 550, and remove the HOUSING TOP 550 and HOUSING EXTENSION 550 (PL4.1.42) from the HOUSING BASE 550.
10) Slide the SUPPORT GUIDE IND (PL4.1.32), and remove it from the groove of the HOUSING EXTENSION 550. Then, separate the HOUSING TOP 550 and HOUSING EXTENSION 550.
11) Remove the GUIDE INDICATOR 1 (PL4.1.34) from the hooks of the HOUSING TOP 550, and remove the SUPPORT GUIDE IND together with the GUIDE INDICATOR 1 and GUIDE INDICATOR 2 from the HOUSING TOP 550.
12) Release the hook of the SUPPORT GUIDE IND, and remove the SUPPORT GUIDE IND from the GUIDE INDICATOR 2.
13) Extract the GUIDE INDICATOR 2 from the back side of the GUIDE INDICATOR 1.

Replacement

1) Insert the GUIDE INDICATOR 2 into the hole of the GUIDE INDICATOR 1 (PL4.1.34) from back.
2) Install the SUPPORT GUIDE IND (PL4.1.32) to the GUIDE INDICATOR2, and secure it with the hook.

NOTE **Install the SUPPORT GUIDE IND to the GUIDE INDICATOR 2 in the direction shown in the figure.**

3) Install the SUPPORT GUIDE IND together with the GUIDE INDICATOR 1 and GUIDE INDICATOR 2 to the HOUSING TOP 550 (PL4.1.16), and secure the GUIDE INDICATOR 1 using the 2 hooks of the HOUSING TOP 550.
4) Slide the SUPPORT GUIDE IND (PL4.1.32) along the groove of the HOUSING EXTENSION 550 to install, and assemble the HOUSING TOP 550 and HOUSING EXTENSION 550 into 1 unit.
5) Install the HOUSING EXTENSION 550 and HOUSING TOP 550 (PL4.1.16) to the HOUSING BASE 550 while pushing the LINK SW SIZE1-550 (PL4.1.45), LINK SW SIZE2-550 (PL4.1.46) and LINK SW SIZE3-550 (PL4.1.47) of the HOUSING BASE 550 outward as shown in the figure.(Figure 4.2)

NOTE **Be sure to put 2 claws that on the top of the PLATE ASSY BTM under the hooks on the HOUSING TOP 550.**

6) After assembling the HOUSING TOP 550 to the HOUSING BASE 550 using the 4 hooks, secure them using the 2 screws (gold tapping, 8mm) on both right and left sides, as well as the 6 screws (gold tapping, 8mm) on the back.

NOTE **After tightening the screws, move the GUIDE ASSY END 550 back and forth, and make sure that the LINK SW SIZEs operate smoothly.**

7) Insert the link lever of the GUIDE INDICATOR1 (PL4.1.34) into the hole of the PLATE ASSY BTM.

8) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD R550 (PL4.1.13) to the HOUSING TOP 550.

NOTE

After installing, make sure that the 3 claws of the GUIDE ASSY SD R550 sit correctly in the grooves of the HOUSING TOP 550.

9) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD L550 (PL4.1.11) to the HOUSING TOP 550.

NOTE

After installing, make sure that the 3 claws of the GUIDE ASSY SD L550 sit correctly in the grooves of the HOUSING TOP 550.

10) Push the PLATE ASSY BTM downward to lock.

11) Install the GEAR PINION (PL4.1.12) to the HOUSING TOP 550.

NOTE

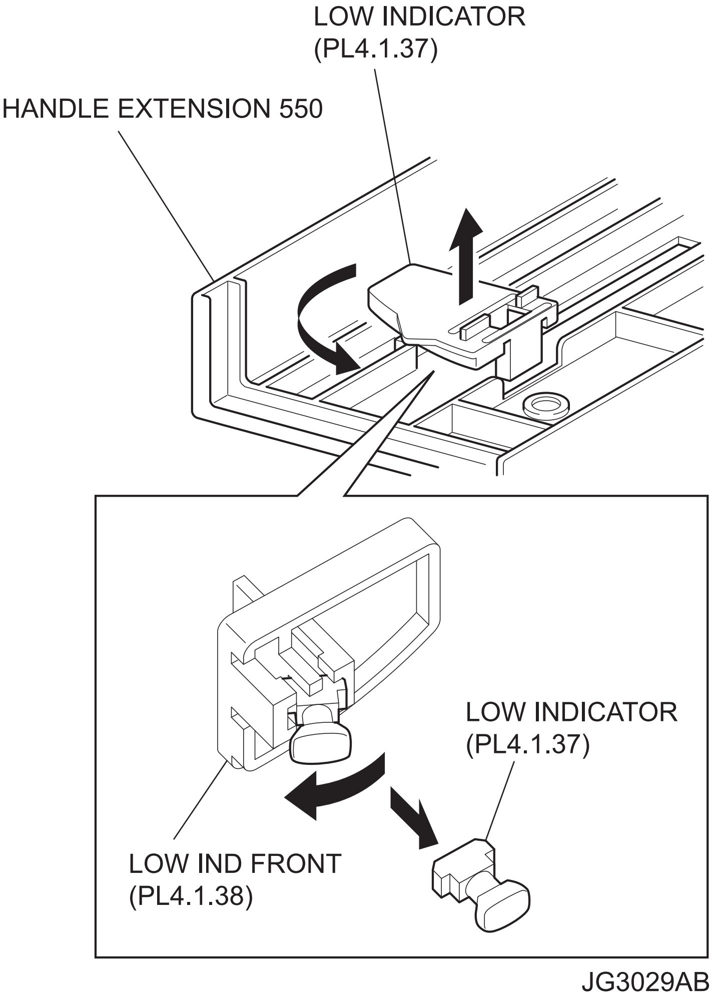
When installing the GEAR PINION, make sure the GUIDE ASSY SD R550 and GUIDE ASSY SD L550 are completely opened. If not, the side register may be misaligned.

12) Install the COVER CST (PL4.1.1) to the 550 PAPER CASSETTE.

NOTE

After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM

RRP4.10 LOW IND FRONT (PL4.1.38)


LOW INDICATOR
(PL4.1.37)
HANDLE EXTENSION 550
LOW INDICATOR
(PL4.1.37)
LOW IND FRONT
(PL4.1.38)
JG3029AB

Removal

1) Remove the COVER CST (PL4.1.1) from the 550 PAPER CASSETTE.
2) Remove the HANDLE EXTENSION 550 (PL4.1.41). (RRP4.7)
3) Turn the LOW INDICATOR (PL4.1.37) by 90 degrees, and remove it together with the LOW IND FRONT from the HANDLE EXTENSION 550.
4) Release the hook on the one side of the LOW IND FRONT, and remove the LOW IND FRONT from the LOW INDICATOR.

Replacement

1) Install the LOW IND FRONT to the LOW INDICATOR (PL4.1.37).

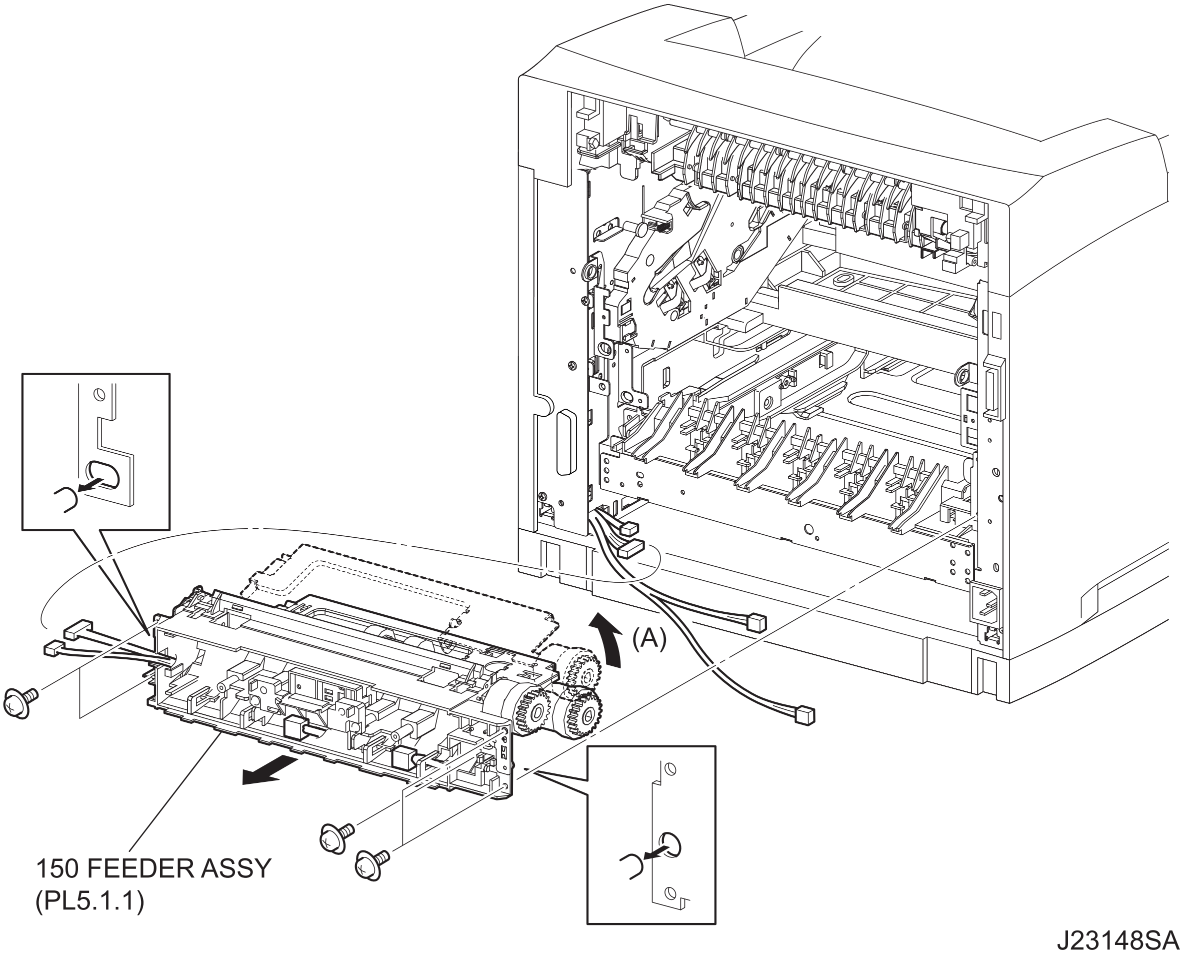
NOTE **When installing the LOW IND FRONT to the LOW INDICATOR, be careful in the installing direction of the LOW IND FRONT.**

2) Turn the LOW INDICATOR by 90 degrees in the opposite direction of the arrow, and install it together with the LOW IND FRONT to the HANDLE EXTENSION 550.
3) Install the HANDLE EXTENSION 550 (PL4.1.41). (RRP4.7)
4) Install the COVER CST (PL4.1.1) to the 550 PAPER CASSETTE.

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM**

RRP5. 150 paper Feeder

RRP5.1 150 FEEDER ASSY (PL5.1.1)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
3) Remove the COVER REAR (PL1.1.3). (RRP1.1)
4) Remove the CHUTE TRANSFER (PL8.1.22) together with the BTR ASSY. (RRP8.11)
5) Disconnect the connector (P/J245) of the HARNESS ASSY TRAY 1 (PL5.1.37) from the HARNESS ASSY CHUTE (PL12.1.17).

6) Disconnect the connector (P/J221) of the HARNESS ASSY TONER 1 (PL5.1.50) from the HARNESS ASSY TONER 2 (PL12.1.28).
7) Disconnect the connector (P/J242) of the CLUTCH ASSY PH (PL5.1.21) from the HARNESS ASSY CHUTE.
8) Disconnect the connector (P/J243) of the CLUTCH REGI (PL5.1.23) from the HARNESS ASSY CHUTE.
9) Release the harness of the HARNESS ASSY CHUTE from the hooks of the 150 FEEDER ASSY.
10) Remove the 5 screws (silver with flange, 8mm) securing the 150 FEEDER ASSY to the printer.
11) Shift the 150 FEEDER ASSY backward, and remove the right boss of the 150 FEEDER ASSY from the frame.
12) Lift up the 150 FEEDER ASSY in the direction of the arrow (A), and remove the left boss of the 150 FEEDER ASSY.

NOTE **Although the 150 FEEDER ASSY clicks into midway when lifted up, push it a little bit further.**

13) Remove the 150 FEEDER ASSY from the printer.

Replacement

1) While lifting up the 150 FEEDER ASSY in the direction of the arrow (A), and install it to the printer. Then, put the bosses at right and left of the 150 FEEDER ASSY into the holes of the printer.
2) Secure the 150 FEEDER ASSY to the printer using the 5 screws (silver with flange, 8mm).

NOTE **One of the screws that secure the 150 FEEDER ASSY is tightened together with the EARTH PLATE BASE (PL5.1.27).**

3) Route the harness of the HARNESS ASSY CHUTE (PL12.1.17) through the hooks of the 150 FEEDER ASSY.
4) Connect the connector (P/J243) of the CLUTCH REGI (PL5.1.23) to the HARNESS ASSY CHUTE.
5) Connect the connector (P/J242) of the CLUTCH ASSY PH (PL5.1.21) to the HARNESS ASSY CHUTE.
6) Connect the connector (P/J221) of the HARNESS ASSY TONER 1 (PL5.1.50) to the HARNESS ASSY TONER 2 (PL12.1.28).
7) Connect the connector (P/J 245) of the HARNESS ASSY TRAY 1 (PL5.1.37) to the HARNESS ASSY CHUTE.
8) Install the CHUTE TRANSFER (PL8.1.22) together with the BTR ASSY to the printer. (RRP8.11)

NOTE **Do not tighten the screw to the left side hole of the CHUTE TRANSFER.**

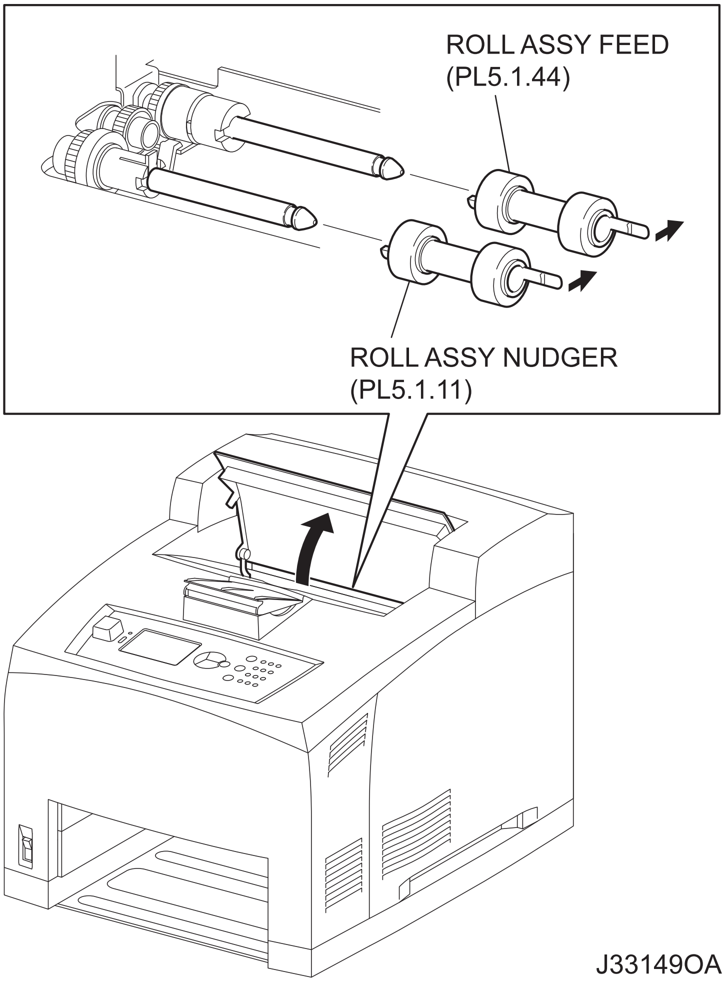
9) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE

There are 2 kinds of screws, make sure they are put in the right place.

10) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
11) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP5.2 ROLL ASSY NUDGER (PL5.1.11), ROLL ASSY FEED (PL5.1.44)



Removal

1) Open the COVER OPEN (PL1.1.2).
2) Release the hook securing the ROLL ASSY NUDGER, and pull the ROLL ASSY NUDGER out from the SHAFT NUDGER (PL5.1.9).
3) Release the hook securing the ROLL ASSY FEED, and pull the ROLL ASSY FEED out from the SHAFT FEED (PL5.1.41).

NOTE **When removing, do not hold the rubber rollers of the ROLL ASSY NUDGER and ROLL ASSY FEED.**

Replacement

NOTE **The ROLL ASSY FEED and ROLL ASSY NUDGER are the same parts, although the names differ.**

1) Install the ROLL ASSY FEED to the SHFT FEED (PL5.1.41), and secure the ROLL ASSY FEED with the hook.

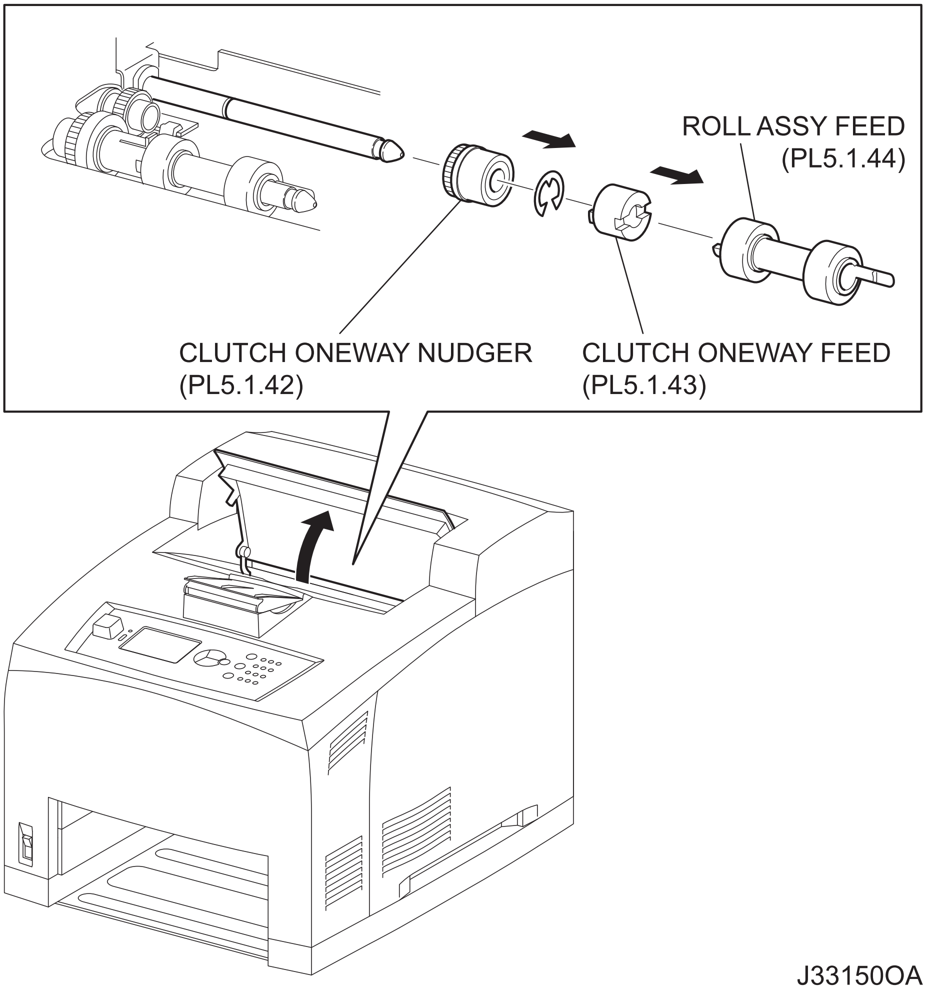
NOTE **Be sure to install the hook of the ROLL ASSY FEED into the groove of the SHAFT FEED.**

2) Install the ROLL ASSY NUDGER to the SHFT NUDGER (PL5.1.9), and secure the ROLL ASSY NUDGER with the hook.

NOTE **Be sure to install the hook of the ROLL ASSY NUDGER into the groove of the SHAFT NUDGER.**

3) Close the COVER OPEN (PL1.1.2).

RRP5.3 CLUTCH ONEWAY NUDGER (PL5.1.42)


ROLL ASSY FEED
(PL5.1.44)
CLUTCH ONEWAY NUDGER
(PL5.1.42)
CLUTCH ONEWAY FEED
(PL5.1.43)
J33150OA

Removal

1) Open the COVER OPEN (PL1.1.2).
2) Remove the ROLL ASSY FEED (PL5.1.44). (RRP5.2)

NOTE **When removing, do not hold the rubber rollers of the ROLL ASSY FEED.**

3) Pull out the CLUTCH ONEWAY FEED (PL5.1.43) from the SHAFT FEED (PL5.1.41).
4) Remove the E-ring securing the CLUTCH ONEWAY NUDGER (PL5.1.42) to the SHAFT FEED.
5) Pull out the CLUTCH ONEWAY NUDGER from the SHAFT FEED.

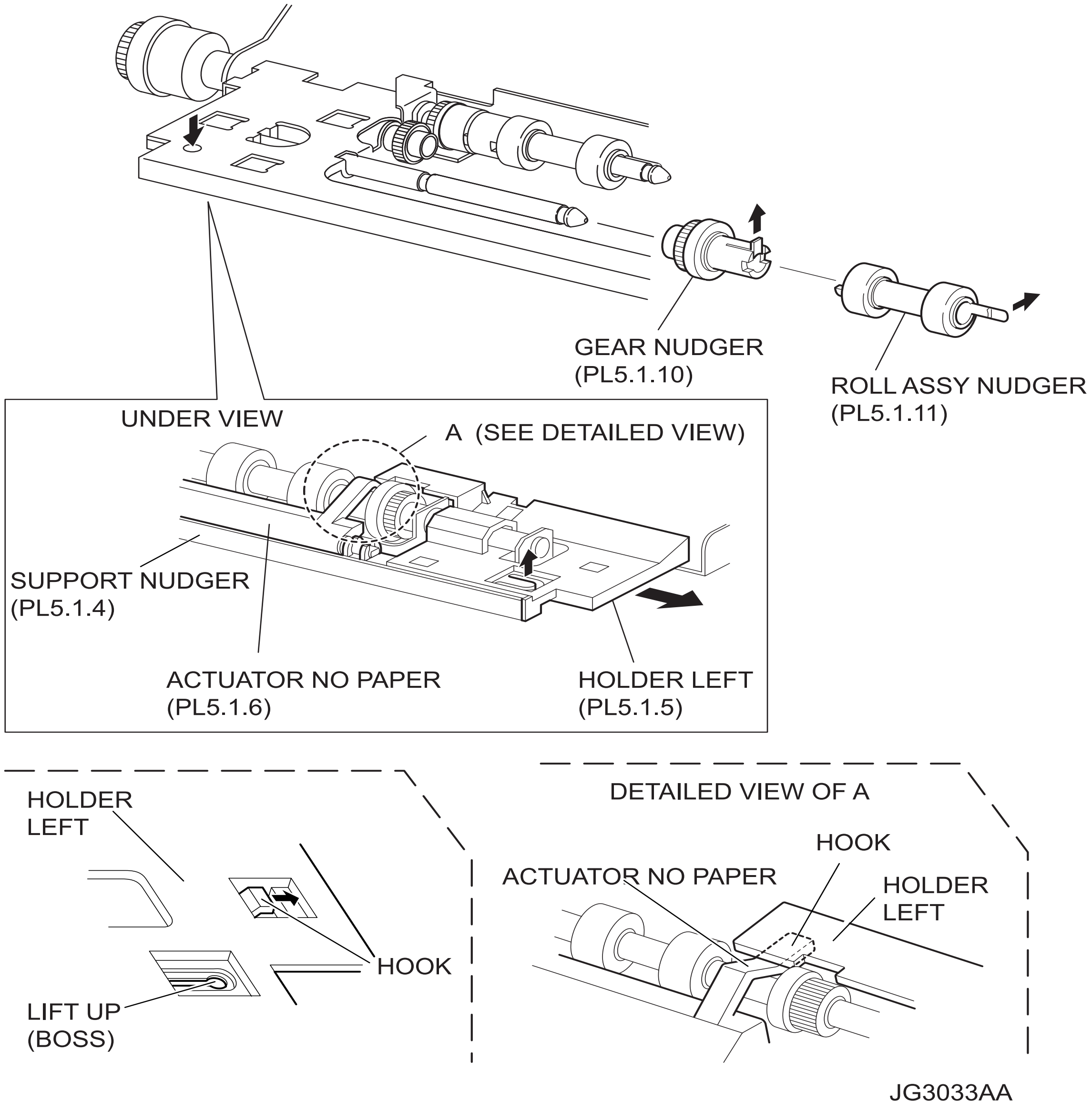
Replacement

1) Install the CLUTCH ONEWAY NUDGER (PL5.1.42) to the SHAFT FEED (PL5.1.41).
2) Clip the E-ring to the SHAFT FEED to secure the CLUTCH ONEWAY NUDGER.
3) Install the CLUTCH ONEWAY FEED (PL5.1.43) to the SHAFT FEED.
4) Install the ROLL ASSY FEED (PL5.1.44) to the SHAFT FEED, and secure it with the hook. (RRP5.2)

NOTE **Be sure to install the hook of the ROLL ASSY FEED into the groove of the SHAFT FEED.**

5) Close the COVER OPEN (PL1.1.2).

RRP5.4 GEAR NUDGER (PL5.1.10)


GEAR NUDGER
(PL5.1.10)
ROLL ASSY NUDGER
(PL5.1.11)
UNDER VIEW
A (SEE DETAILED VIEW)
SUPPORT NUDGER
(PL5.1.4)
ACTUATOR NO PAPER
(PL5.1.6)
HOLDER LEFT
(PL5.1.5)
HOLDER
LEFT
HOOK
LIFT UP
(BOSS)
DETAILED VIEW OF A
ACTUATOR NO PAPER
HOOK
HOLDER
LEFT
JG3033AA

Removal

1) Open the COVER OPEN (PL1.1.2).

2) While pressing down the boss of the HOLDER LEFT (PL5.1.5) at the back of the 150 FEEDER ASSY, shift the HOLDER LEFT in the direction of the arrow to remove the 3 hooks.

3) Remove the HOLDER LEFT from the SUPPORT NUDGER (PL5.1.4). At the same time, the ACTUATOR NO PAPER (PL5.1.6) is removed.

4) Release the hook of the ROLL ASSY NUDGER (PL5.1.11), and pull the ROLL ASSY NUDGER out from the SHAFT NUDGER (PL5.1.9).

5) Release the hook of the GEAR NUDGER, and pull the GEAR NUDGER out from the SHAFT NUDGER.

NOTE **When removing, do not hold the rubber rollers of the ROLL ASSY NUDGER and GEAR NUDGER.**

Replacement

1) Install the GEAR NUDGER to the SHFT NUDGER (PL5.1.9), and secure the GEAR NUDGER with the hook.

NOTE **When installing, do not hold the rubber rollers of the ROLL ASSY NUDGER and GEAR NUDGER.**

NOTE **Be sure to install the hook of the GEAR NUDGER into the groove of the SHAFT NUDGER.**

2) Install the ROLL ASSY NUDGER (PL5.1.11) to the SHFT NUDGER, and secure the ROLL ASSY NUDGER with the hook.

NOTE **Be sure to install the hook of the ROLL ASSY NUDGER into the groove of the SHAFT NUDGER.**

3) Install the HOLDER LEFT (PL5.1.5) and ACTUATOR NO PAPER (PL5.1.6) to the SUPPORT NUDGER (PL5.1.4).

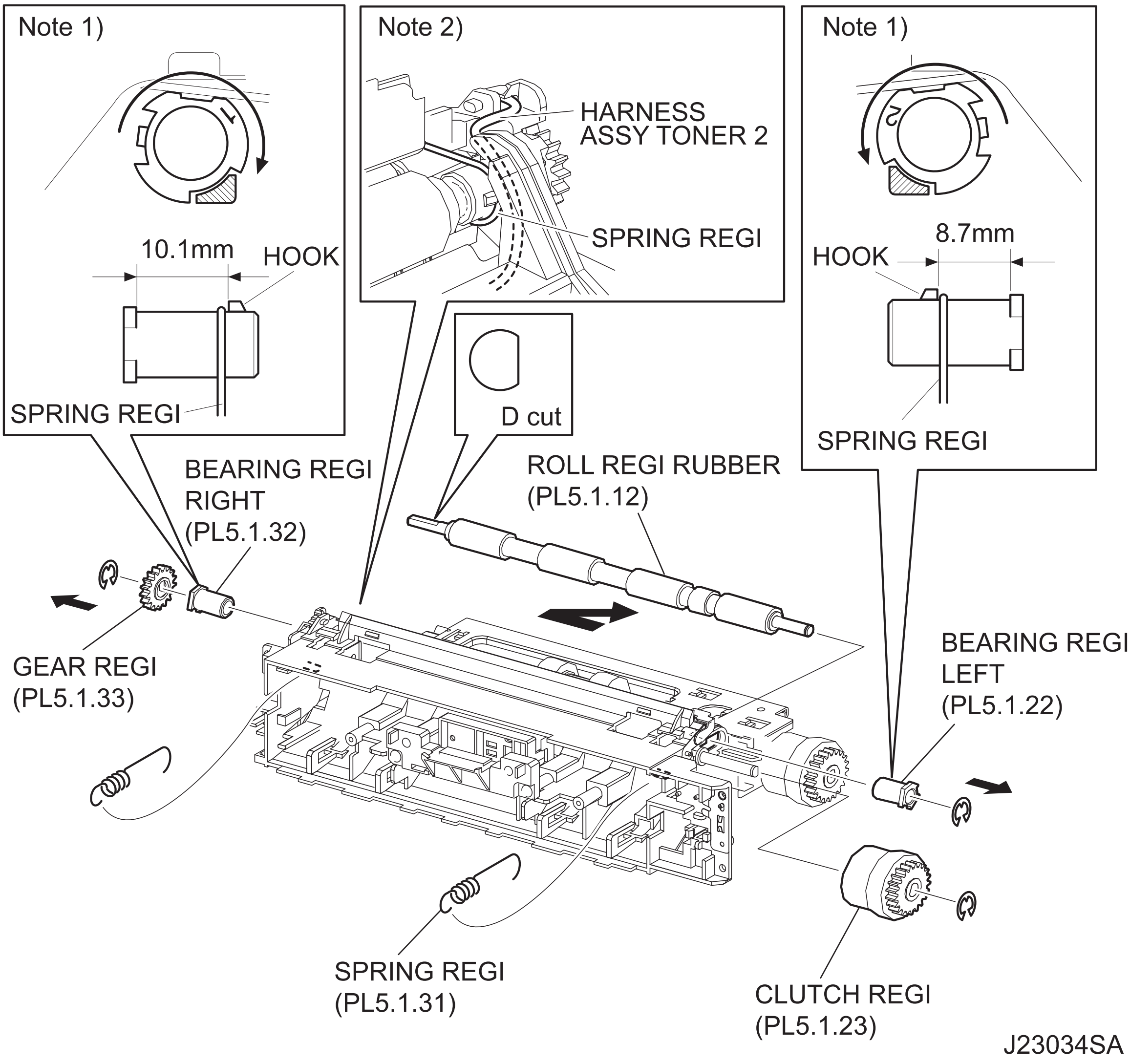
NOTE **Be sure to install the shafts on both ends of the ACTUATOR NO PAPER into the HOLDER LEFT and SUPPORT NUDGER.**

NOTE **Assemble the hook of the ACTUATOR NO PAPER to the HOLDER LEFT as shown in the figure.**

4) Move the HOLDER LEFT (PL5.1.5) in the opposite direction of the arrow, and secure it to the 150 FEEDER ASSY with the 3 hooks.

NOTE **After installing, move the ACTUATOR NO PAPER with a finger, and make sure that the ACTUATOR NO PAPER operates smoothly.**

RRP5.5 ROLL REGI RUBBER (PL5.1.12)


Note 1)
10.1mm
HOOK
SPRING REGI
Note 2)
HARNESS ASSY TONER 2
SPRING REGI
D cut
Note 1)
8.7mm
HOOK
SPRING REGI
BEARING REGI RIGHT (PL5.1.32)
ROLL REGI RUBBER (PL5.1.12)
GEAR REGI (PL5.1.33)
BEARING REGI LEFT (PL5.1.22)
SPRING REGI (PL5.1.31)
CLUTCH REGI (PL5.1.23)
J23034SA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
3) Remove the COVER REAR (PL1.1.3). (RRP1.1)
4) Remove the CHUTE TRANSFER (PL8.1.22) together with the BTR ASSY. (RRP8.11)
5) Remove the 150 FEEDER ASSY (PL5.1.1). (RRP5.1)
6) Remove 2 SPRING REGIs (PL5.1.31) hanging to the CHUTE REGI (PL5.1.25) and ROLL REGI RUBBER (PL5.1.12) on both sides of the 150 FEEDER ASSY.

7) Remove the E-ring securing the GEAR REGI RUBBER (PL5.1.33) to the ROLL REGI RUBBER, and remove the GEAR REGI RUBBER from the ROLL REGI RUBBER.
8) Remove the E-ring securing the BEARING REGI LEFT (PL5.1.22) to the ROLL REGI RUBBER.
9) Pull the BEARING REGI LEFT, and turn it in the direction of the arrow shown in the figure, and remove the notch of the BEARING REGI LEFT from the protrusion of the CHUTE REGI. (NOTE 1)
10) Pull the BEARING REGI LEFT out from the ROLL REGI RUBBER.
11) Remove the E-ring securing the CLUTCH REGI (PL5.1.23), and remove the CLUTCH REGI.
12) Pull the BEARING REGI RIGHT (PL5.1.32), and turn it in the direction of the arrow shown in the figure, and remove the notch of the BEARING REGI RIGHT from the protrusion of the CHUTE REGI. (NOTE 1)
13) Pull the BEARING REGI RIGHT out from the ROLL REGI RUBBER.
14) Shift the ROLL REGI RUBBER left, and extract the right of the ROLL REGI RUBBER from the hole of the CHUTE REGI, and then extract the ROLL REGI RUBBER upward.

NOTE **When removing, do not hold the rubber rollers of the ROLL REGI RUBBER.**

Replacement

1) Shift the ROLL REGI RUBBER in the opposite direction of the arrow, and install it to the 150 FEEDER ASSY.

NOTE **When installing, do not hold the rubber rollers of the ROLL REGI RUBBER.**

NOTE **Install the ROLL REGI RUBBER so that its D-cut is positioned at the BEARING REGI RIGHT side.**

2) Install the BEARING REGI RIGHT (PL5.1.32) to the ROLL REGI RUBBER.

NOTE **The shapes of the flange and the positions of the hook are different on the BEARING REGI RIGHT (white) and BEARING REGI LEFT (black).**

3) Turn the BEARING REGI RIGHT in the opposite direction of the arrow, and install it to the CHUTE REGI.
4) Install the BEARING REGI LEFT (PL5.1.22) to the ROLL REGI RUBBER.

NOTE **The shapes of the flange and the positions of the hook are different on the BEARING REGI RIGHT (white) and BEARING REGI LEFT (black).**

5) Turn the BEARING REGI LEFT in the opposite direction of the arrow, and install it to the CHUTE REGI.
6) Clip the E-ring to the ROLL REGI RUBBER to secure the BEARING REGI LEFT.

7) Install the GEAR REGI RUBBER (PL5.1.33) to the ROLL REGI RUBBER, and secure it using the E-ring.

8) Hang 2 SPRING REGIs (PL5.1.31) to the CHUTE REGI (PL5.1.25) and BEARING REGI RUBBER.

NOTE

When hanging the SPRING REGIs, make sure that the SPRING REGIs are hung to the boss of the CHUTE REGI, and to the inside of the hooks of the BEARING REGI LEFT and BEARING REGI RIGHT.

After hanging the SPRING REGIs, make sure the SPRING REGIs have not pinched the HARNESS ASSY TONER 2. (Refer to NOTE2.)

9) Install the CLUTCH REGI (PL5.1.23). (RRP5.6)

10) Install the 150 FEEDER ASSY (PL5.1.1). (RRP5.1)

11) Install the CHUTE TRANSFER (PL8.1.22) together with the BTR ASSY. (RRP8.11)

NOTE

Do not tighten the screw to the left side hole of the CHUTE TRANSFER.

12) Install the COVER REAR (PL1.1.3). (RRP1.1)

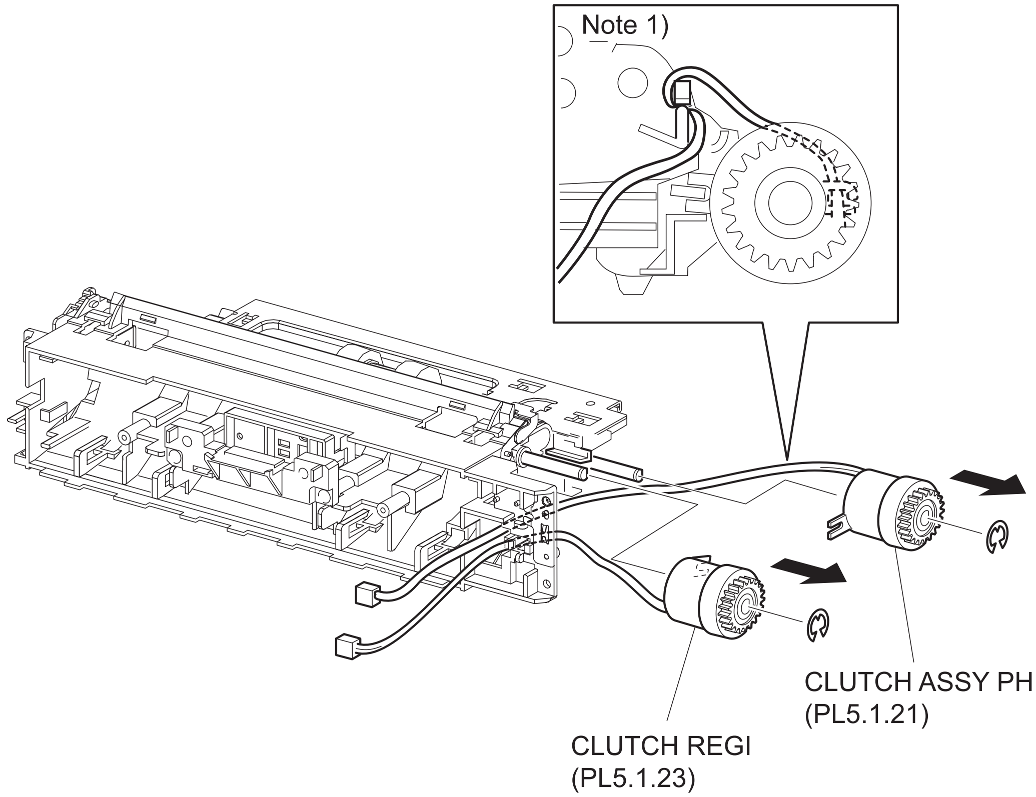
NOTE

There are 2 kinds of screws, make sure they are put in the right place.

13) Install the FUSER ASSY (PL8.1.20). (RRP8.8)

14) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP5.6 CLUTCH ASSY PH (PL5.1.21), CLUTCH REGI (PL5.1.23)



J23035SA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
3) Remove the COVER REAR (PL1.1.3). (RRP1.1)
4) Remove the CHUTE TRANSFER (PL8.1.22) together with the BTR ASSY. (RRP8.11)
5) Remove the 150 FEEDER ASSY (PL5.1.1). (RRP5.1)
6) Remove the E-ring securing the CLUTCH ASSY PH, and remove the CLUTCH ASSY PH from the SHAFT FEED (PL5.1.41).
7) Remove the E-ring securing the CLUTCH REGI, and remove the CLUTCH REGI from the ROLL REGI METAL (PL5.1.34).

Replacement

NOTE **The part names differ with the CLUTCH ASSY PH and CLUTCH REGI, but they are the same parts.**

1) Install the CLUTCH REGI to the ROLL REGI METAL (PL5.1.34), and secure it using the E-ring.

NOTE **When installing, make sure that the notch of the CLUTCH REGI is combined with the boss of the CHUTE REGI.**

2) Install the CLUTCH ASSY PH to the SAHFT FEED, and secure it using the E-ring.

NOTE **When installing, make sure that the notch of the CLUTCH ASSY PH is combined with the boss of the CLUTCH ASSY PH.**

NOTE **The harness of the CLUTCH ASY PH should be one turned around the portion of the CHUTE REGI as shown in the figure.**

3) Install the 150 FEEDER ASSY (PL5.1.1). (RRP5.1)
4) Install the CHUTE TRANSFER (PL8.1.22) together with the BTR ASSY. (RRP8.11)

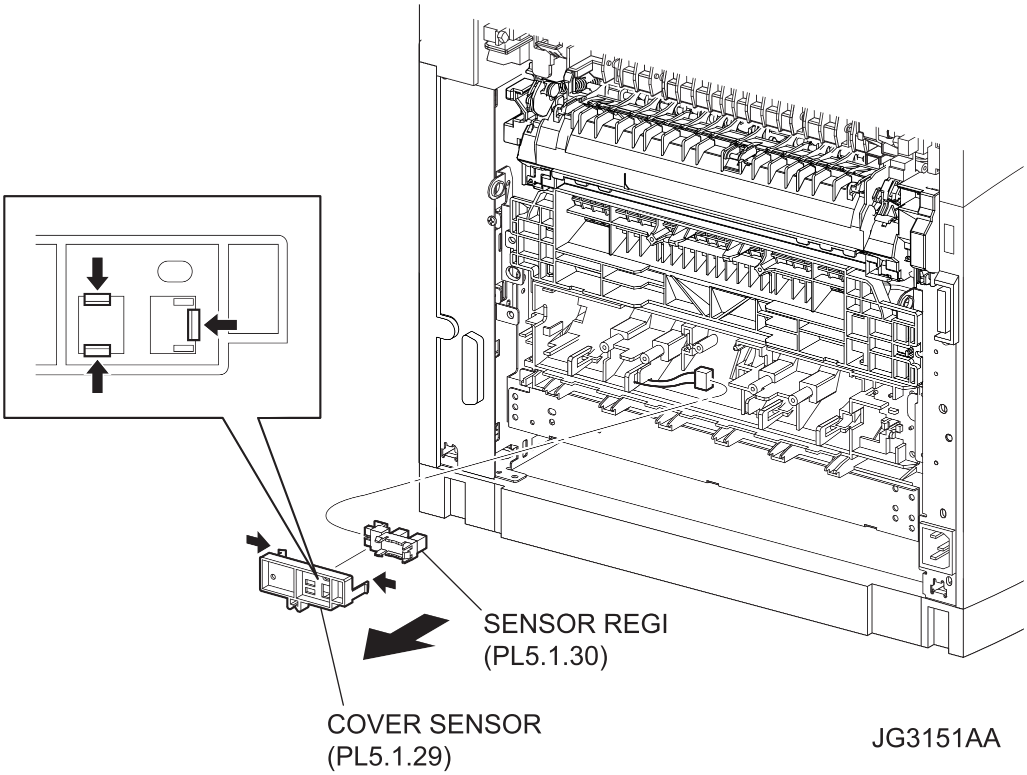
NOTE **Do not tighten the screw to the left side hole of the CHUTE TRANSFER.**

5) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

6) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
7) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP5.7 SENSOR REGI (PL5.1.30)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Release the hooks securing the COVER SENSOR (PL5.1.29), and remove the COVER SENSOR from the CHUTE ASSY REGI.
4) Release the hooks securing the SENSOR REGI, and remove the SENSOR REGI from the COVER SENSOR.
5) Disconnect the connector (P/J241) of the HARNESS ASSY TRAY 1 (PL5.1.37) from the SENSOR REGI.

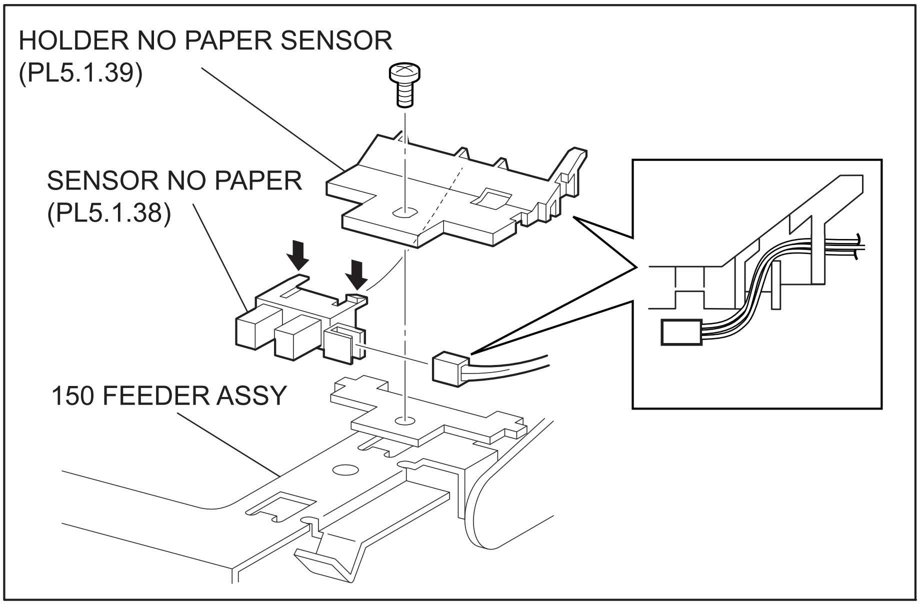
Replacement

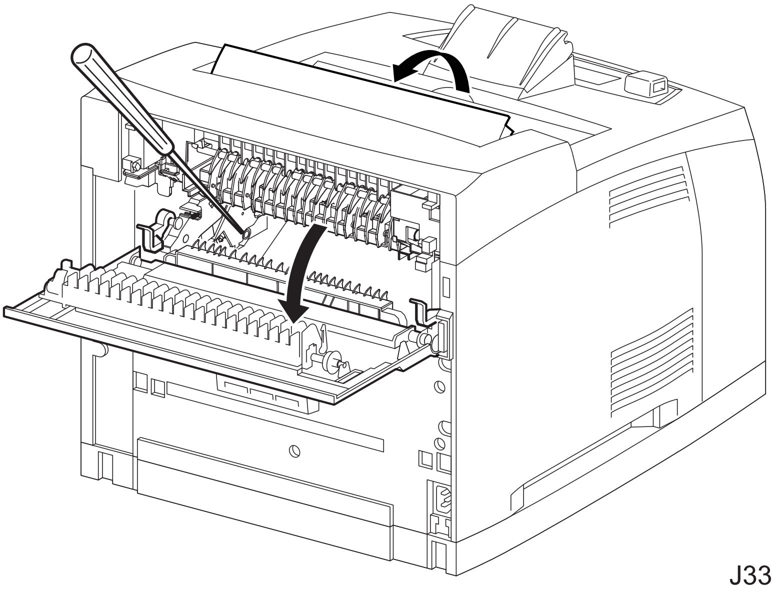
1) Connect the connector (P/J241) of the HARNESS ASSY TRAY 1 (PL5.1.37) to the SENSOR REGI.
2) Install the SENSOR REGI to the COVER SENSOR (PL5.1.29), and secure it using hooks.
3) Install the COVER SENSOR to the CHUTE ASSY REGI, and secure it using hooks.
4) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

5) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP5.8 NO PAPER SENSOR (PL5.1.38)


HOLDER NO PAPER SENSOR
(PL5.1.39)
SENSOR NO PAPER
(PL5.1.38)
150 FEEDER ASSY



J33152OA

Removal

1) Open the COVER OPEN (PL1.1.2).
2) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Lift up the 150 FEEDER ASSY a little, insert a screwdriver through the space left by the FUSER ASSY, and remove the screw (gold, 8mm) securing the HOLDER NO PAPER SENSOR (PL5.1.39).
5) Remove the HOLDER NO PAPER SENSOR from the 150 FEEDER ASSY.
6) Release the hooks securing the NO PAPER SENSOR to the HOLDER NO PAPER SENSOR, and remove the NO PAPER SENSOR.
7) Disconnect the HARNESS ASSY TRAY 1 (PL5.1.37) from the connector (P/J240) of the NO PAPER SENSOR.

Replacement

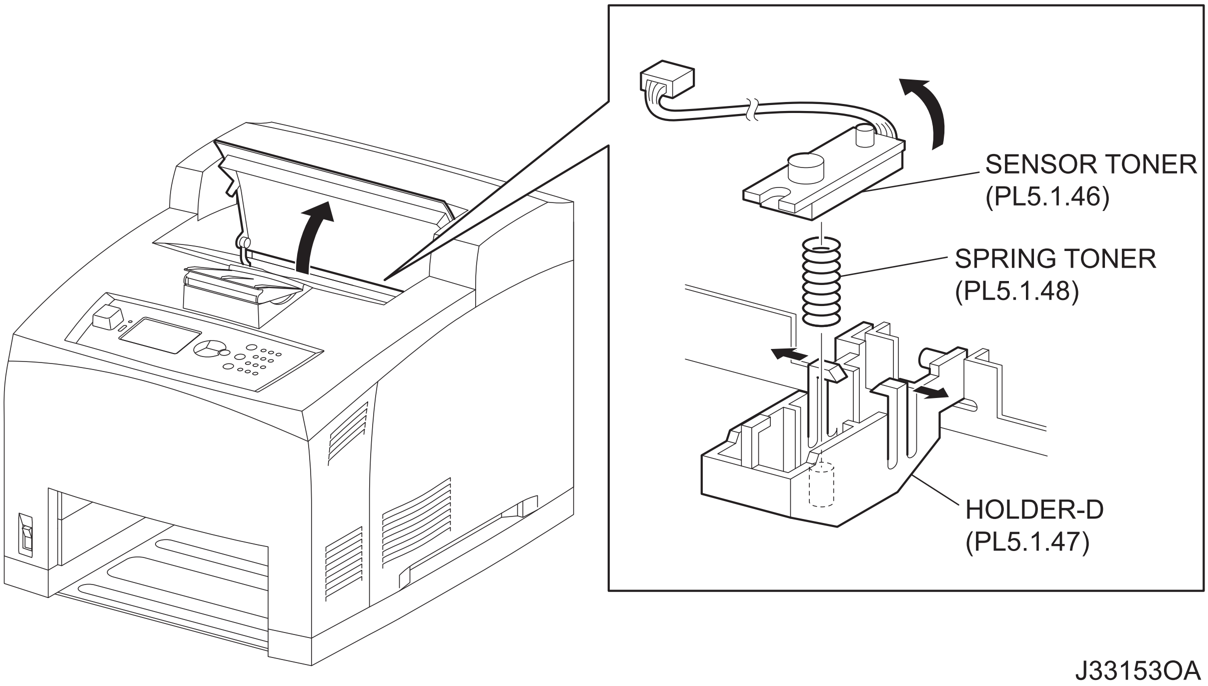
1) Connect the connector (P/J240) of the HARNESS ASSY TRAY 1 (PL5.1.37) to the connector of the NO PAPER SENSOR.
2) Install the NO PAPER SENSOR to the HOLDER NO PAPER SENSOR (PL5.1.39), and secure it using hooks.
3) Put the wires of the HARNESS ASSY TRAY 1 into the notch of the HOLDER NO PAPER SENSOR as shown in the figure.
4) Insert a screwdriver through the space left by the FUSER ASSY, and install the HOLDER NO PAPER SENSOR to the 150 FEEDER ASSY using the screw (gold, 8mm).

NOTE

After tightening the screw, make sure that the wires of the HARNESS ASSY TRAY 1 have not pinched.

5) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
6) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)
7) Close the COVER OPEN (PL1.1.2).

RRP5.9 SENSOR TONER (PL5.1.46)



Removal

1) Open the COVER OPEN (PL1.1.2).
2) Disconnect the connector (P/J220) of the SENSOR TONER from the HARNESS ASSY TONER 1 (PL5.1.50).
3) Release the holdings of the harness of the SENSOR TONER from 3 clamps.
4) Release 2 hooks of the HOLDER-D (PL5.1.47), and remove the SENSOR TONER from the HOLDER-D by turning it in the direction of the arrow.

NOTE **When removing the SENSOR TONER, be careful not to lose the SPRING TONER (PL5.1.48).**

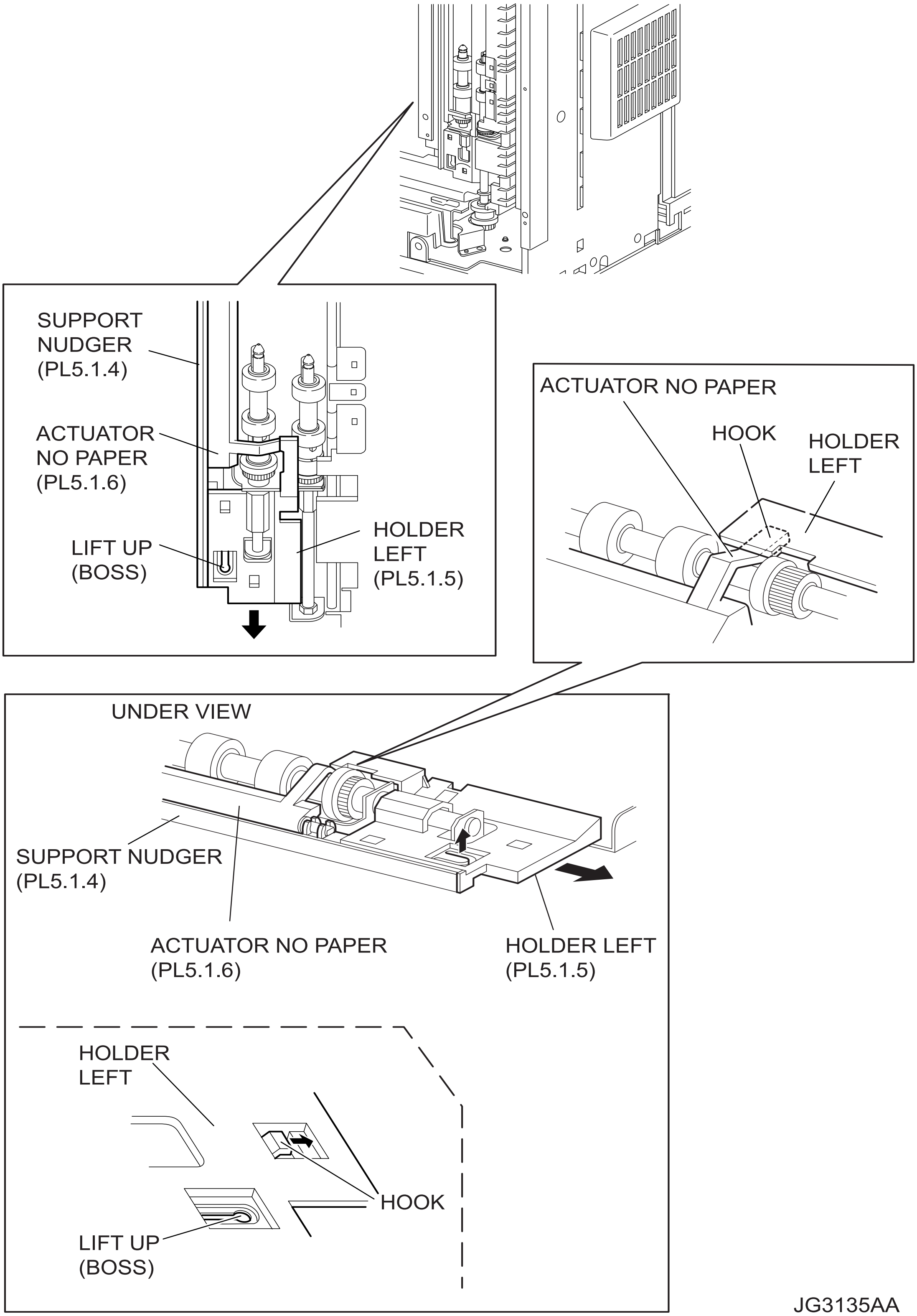
Replacement

1) Install the SENSOR TONER to the HOLDER-D (PL5.1.47) by turning it in the opposite direction of the arrow, and secure it using 2 hooks.

NOTE **When installing the SENSOR TONER, put the SPRING TONER on the boss of the HOLDER-D, and then install the SENSOR TONER on it.**

2) Secure the harness of the SENSOR TONER using the 3 clamps.
3) Connect the connector (P/J220) of the SENSOR TONER to the HARNESS ASSY TRAY 1 (PL5.1.50).
4) Close the COVER OPEN (PL1.1.2).

RRP5.10 ACTUATOR NO PAPER (PL5.1.6)


SUPPORT NUDGER (PL5.1.4)
ACTUATOR NO PAPER (PL5.1.6)
LIFT UP (BOSS)
HOLDER LEFT (PL5.1.5)
ACTUATOR NO PAPER
HOOK
HOLDER LEFT
UNDER VIEW
SUPPORT NUDGER (PL5.1.4)
ACTUATOR NO PAPER (PL5.1.6)
HOLDER LEFT (PL5.1.5)
HOLDER LEFT
HOOK
LIFT UP (BOSS)

JG3135AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
3) Place the printer down on its left side.

NOTE **Be careful not to scratch the cover, and do not given a shock to the printer from a top.**

4) Open the COVER OPEN (PL1.1.2).
5) While lifting up the boss of the HOLDER LEFT (PL5.1.5) at the back of the 150 FEEDER ASSY, shift the HOLDER LEFT in the direction of the arrow to remove 3 hooks.
6) Remove the HOLDER LEFT from the SUPPORT NUDGER (PL5.1.4). At the same time, the ACTUATOR NO PAPER (PL5.1.6) is removed.

Replacement

1) Install the HOLDER LEFT (PL5.1.5) and ACTUATOR NO PAPER (PL5.1.6) to the SUPPORT NUDGER (PL5.1.4).

NOTE **Be sure to install the shafts on both ends of the ACTUATOR NO PAPER into the HOLDER LEFT and SUPPORT NUDGER.**

NOTE **Assemble the hook of the ACTUATOR NO PAPER to the HOLDER LEFT as shown in the figure.**

2) Move the HOLDER LEFT (PL5.1.5) in the opposite direction of the arrow, and secure it to the 150 FEEDER ASSY with 3 hooks.

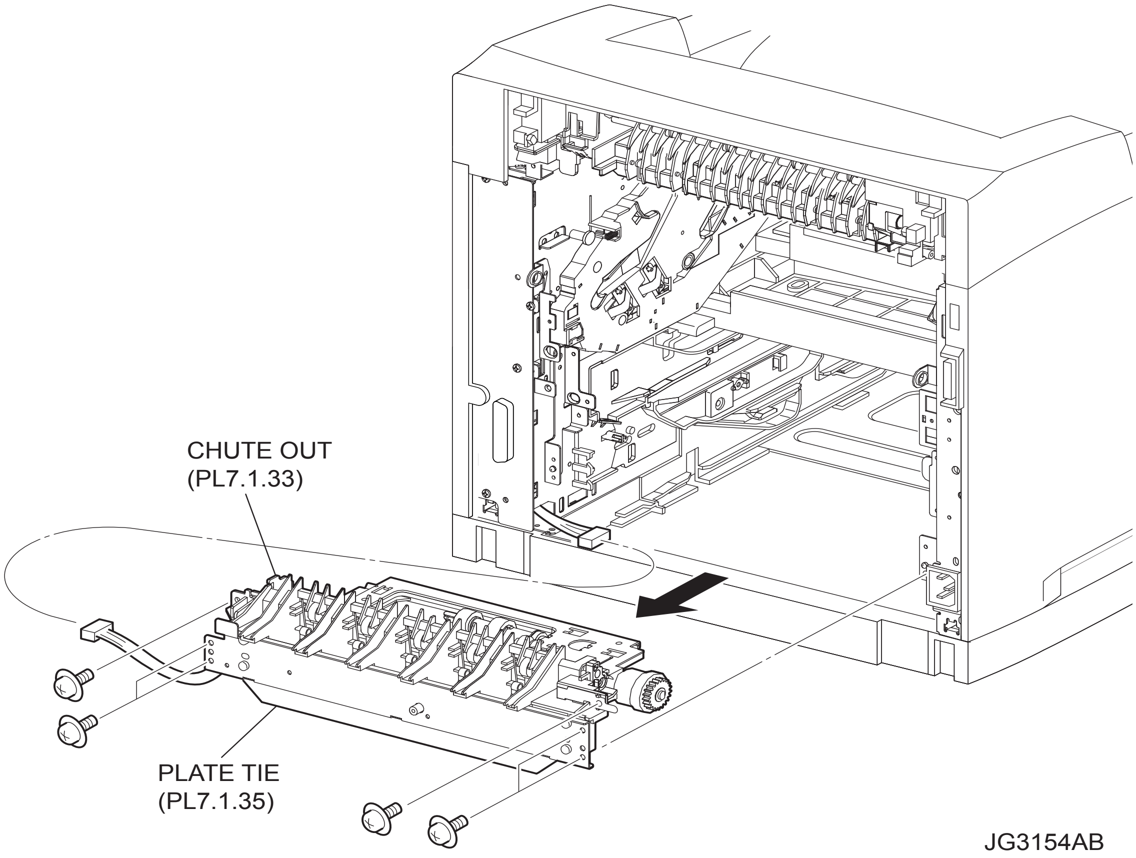
NOTE **After installing, move the ACTUATOR NO PAPER with a finger, and make sure that the ACTUATOR NO PAPER operates smoothly.**

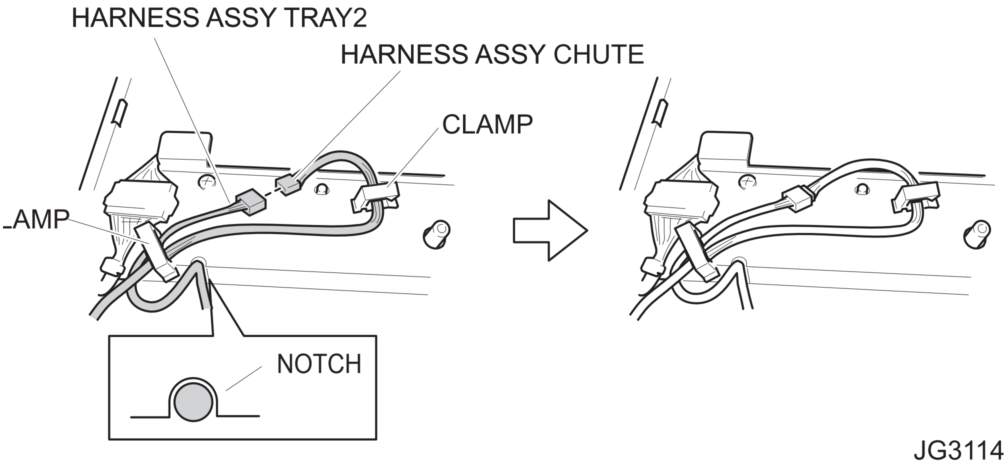
3) Return the printer to the normal use state.
4) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
5) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP6. Blank

RRP7. 550 Paper Feeder

RRP7.1 550 FEEDER ASSY (PL7.1.10)


CHUTE OUT
(PL7.1.33)
PLATE TIE
(PL7.1.35)
JG3154AB


HARNESS ASSY TRAY2
HARNESS ASSY CHUTE
CLAMP
_AMP
NOTCH
JG3114AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
3) Remove the COVER REAR (PL1.1.3). (RRP1.1)
4) Remove the CHUTE TRANSFER (PL8.1.22) together with the BTR ASSY. (RRP8.11)
5) Remove the 150 FEEDER ASSY (PL5.1.1). (RRP5.1)
6) Disconnect the connector (P/J248) of the HARNESS ASSY TRAY 2 (PL7.1.36) from the HARNESS ASSY CHUTE (PL12.1.17).
7) Release the holdings of the harness from 2 clamps on the PLATE TIE (PL7.1.35).
8) Remove the 4 screws (silver with flange, and spring washer 8mm) securing the PLATE TIE to the frame.
9) Remove the 2 screws (silver with flange, and spring washer 8mm) securing the CHUTE OUT (PL7.1.33) to the frame.
10) Remove the 550 FEEDER ASSY from the frame.

Replacement

1) Install the 550 FEEDER ASSY to the frame.
2) Secure the CHUTE OUT (PL7.1.33) to the frame using the 2 screws (silver with flange, and spring washer 8mm).

NOTE **One of the screws that secure the CHUTE OUT to the frame is tightened together with the SPRING EARTH (PL7.1.31).**

3) Install the PLATE TIE (PL7.1.35) to the frame using the 4 screws (silver with flange, and spring washer 8mm).
4) Secure the harness using the 2 clamps on the PLATE TIE. (Refer to figures.)

NOTE **When installing, put the harness into the notch on the PLATE TIE, and arrange it as shown in the figure.**

5) Connect the connector (P/J248) of the HARNESS ASSY TRAY 2 (PL7.1.36) to the HARNESS ASSY CHUTE (PL12.1.17).
6) Install the 150 FEEDER ASSY (PL5.1.1). (RRP5.1)
7) Install the CHUTE TRANSFER (PL8.1.22) together with the BTR ASSY. (RRP8.11)

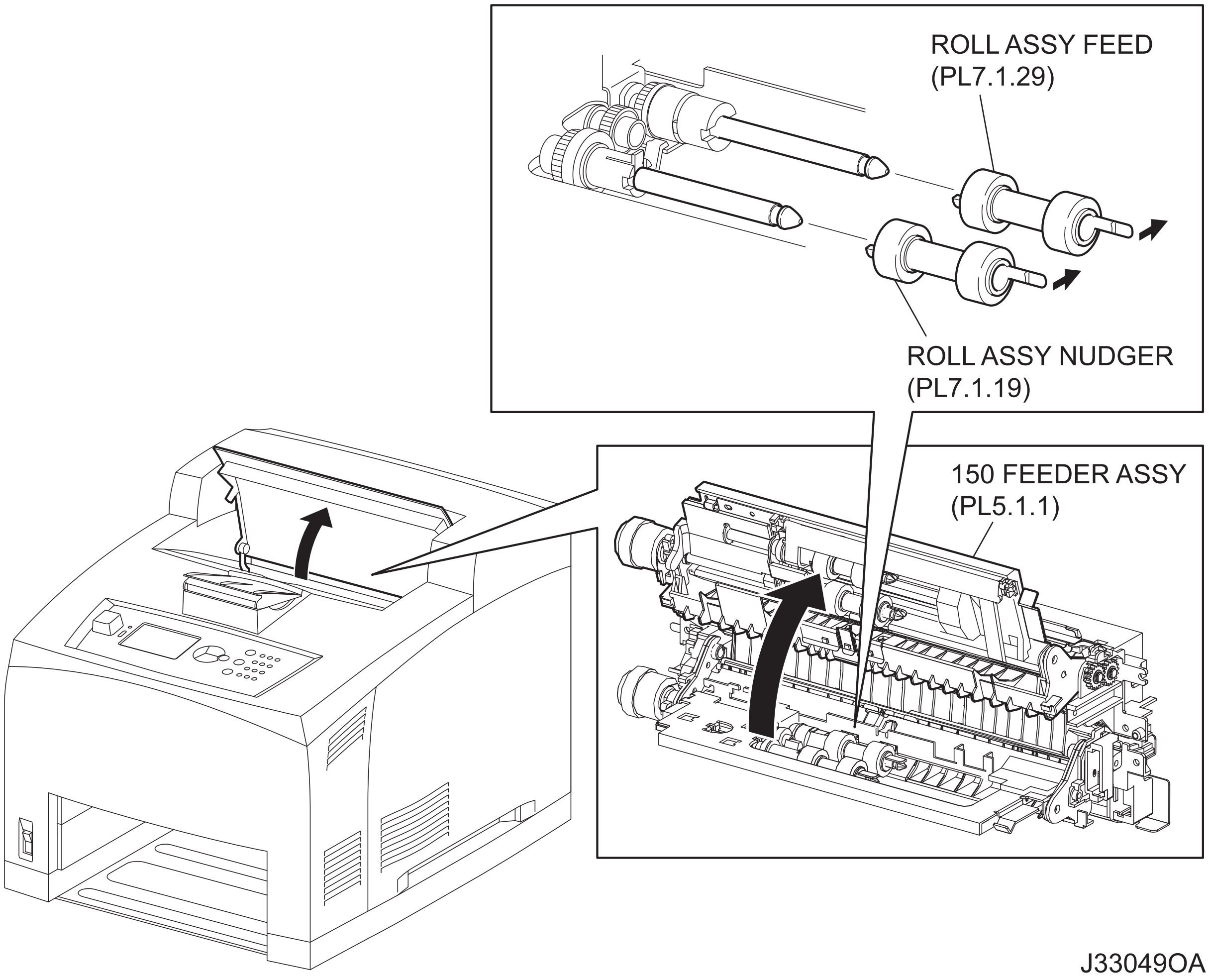
NOTE **Do not tighten the screw to the left side hole of the CHUTE TRANSFER.**

8) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

9) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
10) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP7.2 ROLL ASSY NUDGER (PL7.1.19), ROLL ASSY FEED (PL7.1.29)



Removal

1) Open the COVER OPEN (PL1.1.2) so that the removing operation can be checked visually.
2) Remove the Paper Cassettes of the Tray 1 and Tray 2.
3) Lift up the 150 FEEDER ASSY (PL5.1.1).

NOTE **Although the 150 FEEDER ASSY clicks into midway when lifted up, push it a little bit further.**

4) While holding the 150 FEEDER ASSY, release the hook securing the ROLL ASSY NUDGER b y hand which is inserted through the space left by the Paper Cassettes, and pull it out from the SHAFT NUDGER (PL7.1.17).
5) Release the hook securing the ROLL ASSY FEED by using the same procedures of step 4 above, and pull it out from the SHAFT FEED (PL7.1.26).

NOTE **When removing, do not hold the rubber rollers of the ROLL ASSY NUDGER and ROLL ASSY FEED.**

Replacement

1) While holding the 150 FEEDER ASSY, install the ROLL ASSY FEED to the SHFT FEED (PL7.1.26), and secure the ROLL ASSY FEED with the hook by using the same procedures of step 4 of removal.

NOTE **Be sure to install the hook of the ROLL ASSY FEED into the groove of the SHAFT FEED.**

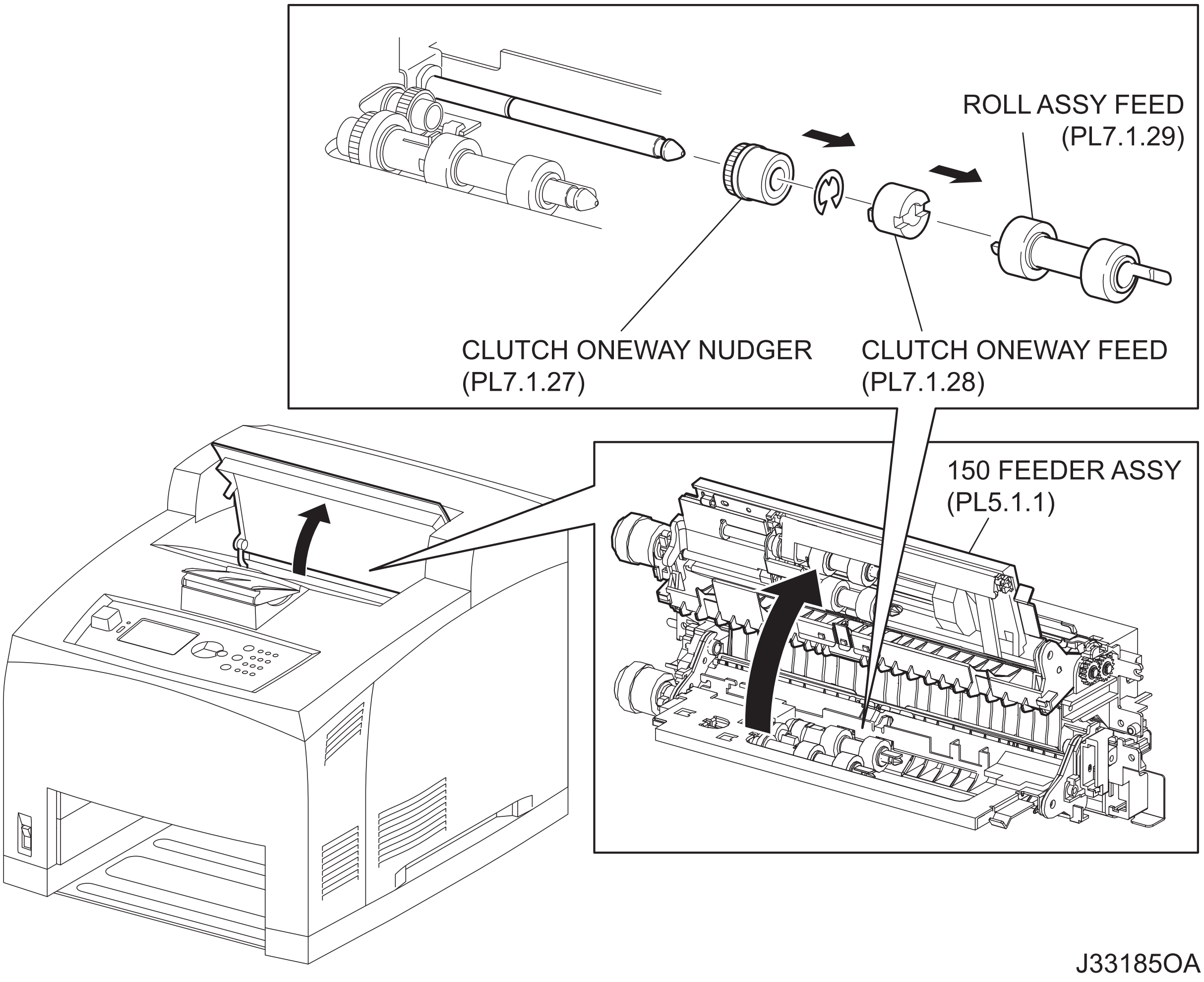
NOTE **When installing, do not hold the rubber rollers of the ROLL ASSY NUDGER and ROLL ASSY FEED.**

2) Install the ROLL ASSY NUDGER to the SHFT NUDGER (PL7.1.17), and secure the ROLL ASSY NUDGER with the hook.

NOTE **Be sure to install the hook of the ROLL ASSY NUDGER into the groove of the SHAFT NUDGER.**

3) Press the 150 FEEDER ASSY (PL5.1.1) down so that it returns to the original position.
4) Install the Paper Cassettes to the Tray 1 and Tray 2.
5) Close the COVER OPEN (PL1.1.2).

RRP7.3 CLUTCH ONEWAY NUDGER (PL7.1.27)


ROLL ASSY FEED
(PL7.1.29)
CLUTCH ONEWAY NUDGER
(PL7.1.27)
CLUTCH ONEWAY FEED
(PL7.1.28)
150 FEEDER ASSY
(PL5.1.1)
J33185OA

Removal

1) Open the COVER OPEN (PL1.1.2) so that the removing operation can be checked visually.
2) Remove the Paper Cassettes of the Tray 1 and Tray 2.
3) Lift up the 150 FEEDER ASSY (PL5.1.1).

NOTE **Although the 150 FEEDER ASSY clicks into midway when lifted up, push it a little bit further.**

4) While holding the 150 FEEDER ASSY, remove the ROLL ASSY FEED (PL7.1.29) b y hand which is inserted through the space left by the Paper Cassettes. (RRP7.2)

NOTE **When removing, do not hold the rubber rollers of the ROLL ASSY FEED.**

5) Pull out the CLUTCH ONEWAY FEED (PL76.1.28) from the SHAFT FEED (PL7.1.26).
6) Remove the E-ring securing the CLUTCH ONEWAY NUDGER to the SHAFT FEED.
7) Pull out the CLUTCH ONEWAY NUDGER from the SHAFT FEED.

Replacement

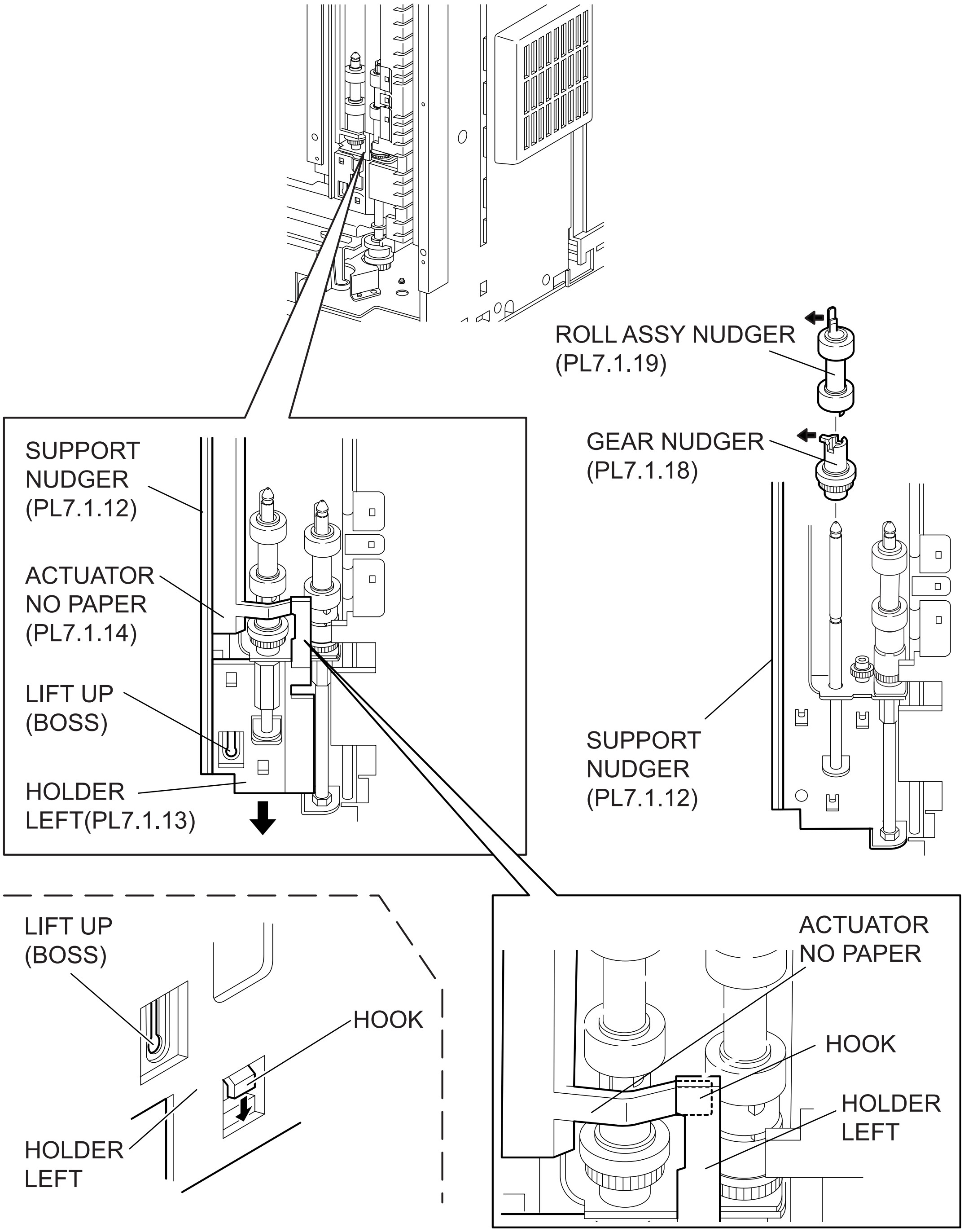
1) Install the CLUTCH ONEWAY NUDGER to the SHAFT FEED (PL7.1.26), and secure it using the E-ring.
2) Install the CLUTCH ONEWAY FEED (PL7.1.28) to the SHAFT FEED.
3) Install the ROLL ASSY FEED (PL7.1.29) to the SHAFT FEED, and secure it with the hook. (RRP7.2)

NOTE **Be sure to install the hook of the ROLL ASSY FEED into the groove of the SHAFT FEED.**

NOTE **When installing, do not hold the rubber rollers of the ROLL ASSY FEED.**

4) Press the 150 FEEDER ASSY (PL5.1.1) down so that it returns to the original position.
5) Close the COVER OPEN (PL1.1.2).

RRP7.4 GEAR NUDGER (PL7.1.18)


ROLL ASSY NUDGER
(PL7.1.19)
GEAR NUDGER
(PL7.1.18)
SUPPORT
NUDGER
(PL7.1.12)
ACTUATOR
NO PAPER
(PL7.1.14)
LIFT UP
(BOSS)
HOLDER
LEFT(PL7.1.13)
SUPPORT
NUDGER
(PL7.1.12)
LIFT UP
(BOSS)
HOOK
HOLDER
LEFT
ACTUATOR
NO PAPER
HOOK
HOLDER
LEFT

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
3) Place the printer down on its left side.

NOTE **Be careful not to scratch the cover, and do not given a shock to the printer from a top.**

4) Open the COVER OPEN (PL1.1.2).
5) While lifting up the boss of the HOLDER LEFT (PL7.1.13) at the back of the 550 FEEDER ASSY, shift the HOLDER LEFT in the direction of the arrow to remove 3 hooks.
6) Remove the HOLDER LEFT from the SUPPORT NUDGER (PL7.1.12). At the same time, the ACTUATOR NO PAPER (PL7.1.14) is removed.
7) Release the hook securing the ROLL ASSY NUDGER (PL7.1.19), and pull it out from the SHAFT NUDGER (PL7.1.17).

NOTE **When removing, do not hold the rubber rollers of the ROLL ASSY NUDGER.**

8) Release the hook securing the GEAR NUDGER, and pull it out from the SHAFT NUDGER.

NOTE **When removing, do not hold the rubber rollers of the GEAR NUDGER.**

Replacement

1) Install the GEAR NUDGER to the SHAFT NUDGER (PL7.1.17), and secure it with the hook.

NOTE **When installing, do not hold the rubber rollers of the GEAR NUDGER.**

NOTE **Be sure to install the hook of the GEAR NUDGER into the groove of the SHAFT NUDGER.**

2) Install the ROLL ASSY NUDGER (PL7.1.19) to the SHAFT NUDGER, and secure it with the hook.

NOTE **When installing, do not hold the rubber rollers of the ROLL ASSY NUDGER.**

NOTE **Be sure to install the hook of the ROLL ASSY NUDGER into the groove of the SHAFT NUDGER.**

3) Install the HOLDER LEFT (PL7.1.13) and ACTUATOR NO PAPER (PL7.1.14) to the SUPPORT NUDGER (PL7.1.12).

NOTE **Be sure to install the shafts on both ends of the ACTUATOR NO PAPER into the HOLDER LEFT and SUPPORT NUDGER.**

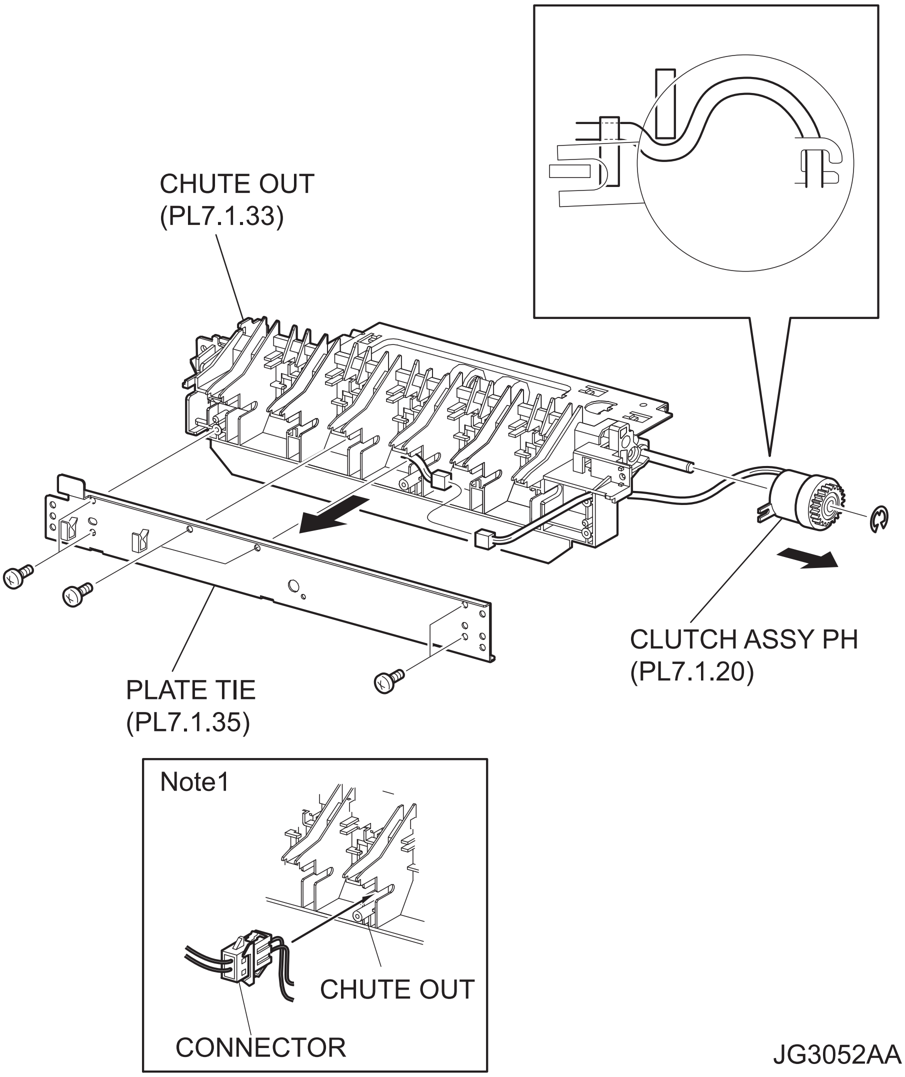
NOTE **Assemble the hook of the ACTUATOR NO PAPER to the HOLDER LEFT as shown in the figure.**

4) Move the HOLDER LEFT in the opposite direction of the arrow, and secure it to the 550 FEEDER ASSY with the 3 hooks.

NOTE **After installing, move the ACTUATOR NO PAPER with a finger, and make sure that the ACTUATOR NO PAPER operates smoothly.**

5) Return the printer to the normal use state.
6) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
7) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP7.5 CLUTCH ASSY PH (PL7.1.20)


CHUTE OUT
(PL7.1.33)
CLUTCH ASSY PH
(PL7.1.20)
PLATE TIE
(PL7.1.35)
Note1
CHUTE OUT
CONNECTOR
JG3052AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
3) Remove the COVER REAR (PL1.1.3). (RRP1.1)
4) Remove the CHUTE TRANSFER (PL8.1.22) together with the BTR ASSY. (RRP8.11)
5) Remove the 150 FEEDER ASSY (PL5.1.1). (RRP5.1)
6) Remove the 550 FEEDER ASSY (PL7.1.10). (RRP7.1)
7) Remove the 6 screws (gold tapping, 8mm) securing the PLATE TIE (PL7.1.35) to the CHUTE OUT (PL7.1.33), and remove the PLATE TIE from the CHUTE OUT.

8) Disconnect the connector (P/J247) of the CLUTCH ASSY PH from the HARNESS ASSY TRAY 2 (PL7.1.36).
9) Remove the E-ring securing the CLUTCH ASSY PH, and remove the CLUTCH ASSY PH from the SHAFT FEED (PL7.1.26).

Replacement

1) Install the CLUTCH ASSY PH to the SHAFT FEED (PL7.1.26), and secure it using the E-ring.

NOTE **When installing, make sure that the notch of the CLUTCH ASSY PH is combined with the boss of the CHUTE OUT.**

2) Connect the connector (P/J247) of the CLUTCH ASSY PH to the HARNESS ASSY TRAY 2 (PL7.1.36). After connecting the connector, put the connector into the space between the ribs of the CHUTE OUT.

NOTE **Be careful of the arranging of the harness of the CLUTCH ASSY PH.**

3) Install the PLATE TIE (PL7.1.35) to the CHUTE OUT (PL7.1.33) using the 6 screws (gold tapping, 8mm).
4) Install the 550 FEEDER ASSY (PL7.1.10). (RRP7.1)
5) Install the 150 FEEDER ASSY (PL5.1.1). (RRP5.1)
6) Install the CHUTE TRANSFER (PL8.1.22). (RRP8.11)

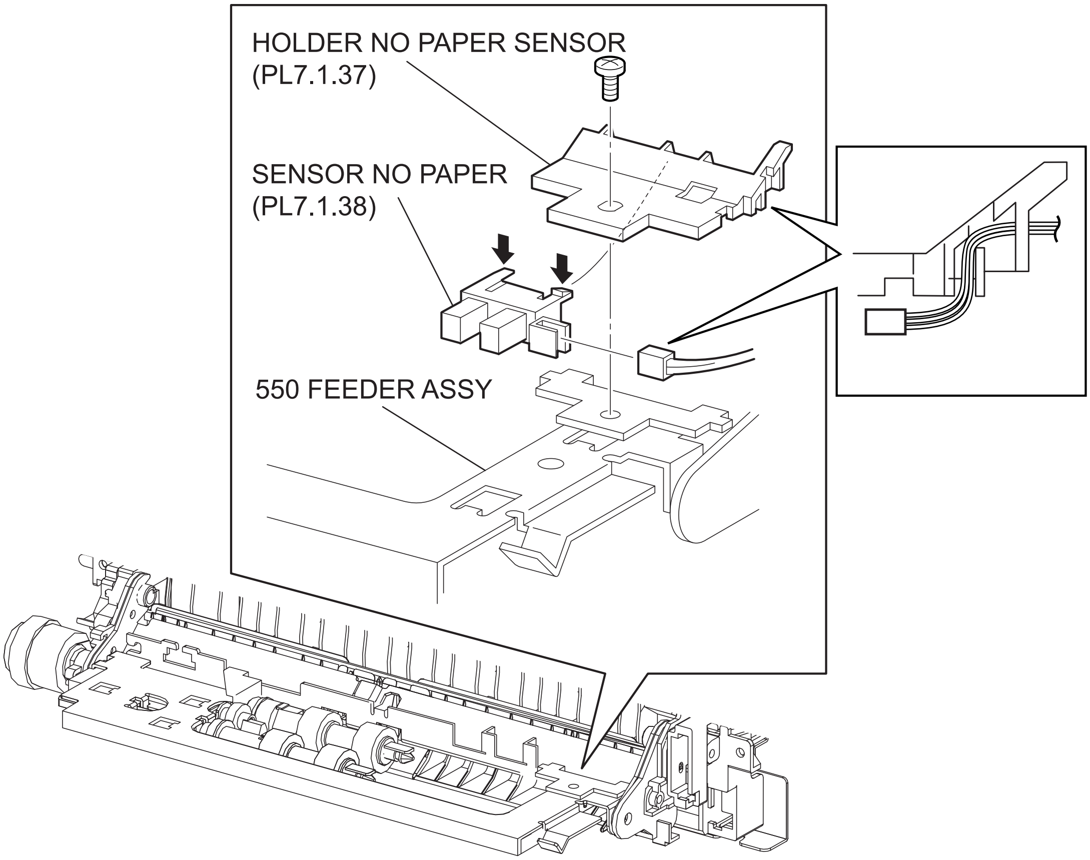
NOTE **Do not tighten the screw to the left side hole of the CHUTE TRANSFER.**

7) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

8) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
9) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP7.6 NO PAPER SENSOR (PL7.1.38)



JG3053AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
3) Remove the COVER REAR (PL1.1.3). (RRP1.1)
4) Remove the CHUTE TRANSFER (PL8.1.22) together with the BTR ASSY. (RRP8.11)
5) Remove the 150 FEEDER ASSY (PL5.1.1). (RRP5.1)
6) Remove the screw (gold, 6mm) securing the HOLDER NO PAPER SENSOR (PL7.1.37).
7) Remove the HOLDER NO PAPER SENSOR from the 550 FEEDER ASSY.
8) Release the hooks securing the NO PAPER SENSOR to the HOLDER NO PAPER SENSOR, and remove the NO PAPER SENSOR.
9) Disconnect the HARNESS ASSY TRAY 2 (PL7.1.36) from the connector (P/J246) of the NO PAPER SENSOR.

Replacement

1) Connect the HARNESS ASSY TRAY 2 (PL7.1.36) to the connector (P/J246) of the NO PAPER SENSOR.
2) Install the NO PAPER SENSOR to the HOLDER NO PAPER SENSOR (PL7.1.37), and secure it using hooks.
3) Put the wires of the HARNESS ASSY TRAY 2 to the notch of the HOLDER NO PAPER SENSOR as shown in the figure.
4) Install the HOLDER NO PAPER SENSOR to the 550 FEEDER ASSY using the screw (gold, 6mm).

NOTE **After tightening the screw, make sure that the wires of the HARNESS ASSY TRAY 2 have not pinched.**

5) Install the 150 FEEDER ASSY (PL5.1.1). (RRP5.1)
6) Install the CHUTE TRANSFER (PL8.1.22). (RRP8.11)

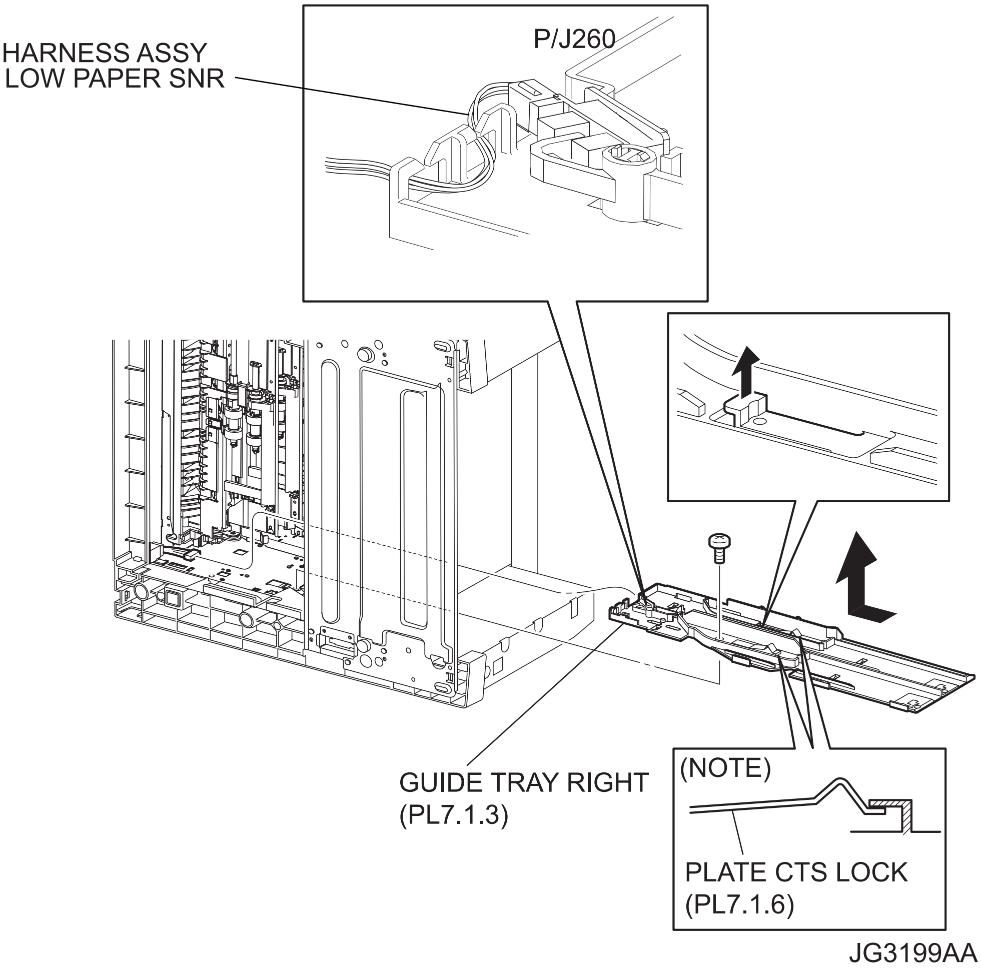
NOTE **Do not tighten the screw to the left side hole of the CHUTE TRANSFER.**

7) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

8) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
9) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP7.7 GUIDE TRAY RIGHT (PL7.1.3)


HARNESS ASSY
LOW PAPER SNR
P/J260
GUIDE TRAY RIGHT
(PL7.1.3)
(NOTE)
PLATE CTS LOCK
(PL7.1.6)
JG3199AA

Removal

1) Remove the EP CARTRIDGE and Paper Cassettes.
2) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
3) Remove the COVER REAR (PL1.1.3). (RRP1.1)
4) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
5) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
6) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
7) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
8) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
9) Remove the COVER TOP (PL1.1.7). (RRP1.4)
10) Remove the COVER FRONT (PL1.1.5). (RRP1.5)

11) Place the printer down on its right side.
12) Disconnect the connector (P/J260) of the HARNESS ASSY LOW PAPER SNR from the GUIDE TRAY RIGHT.
13) Remove the screw (silver, 6mm) securing the GUIDE TRAY RIGHT to the frame.
14) Lift up the hook of the GUIDE TRAY RIGHT, and shift it in the direction of the arrow. Then, remove the GUIDE TRAY RIGHT from the frame.

Replacement

1) Shift the GUIDE TRAY RIGHT in the opposite direction of the arrow to install it to the frame, and secure it using the screw (silver, 6mm).

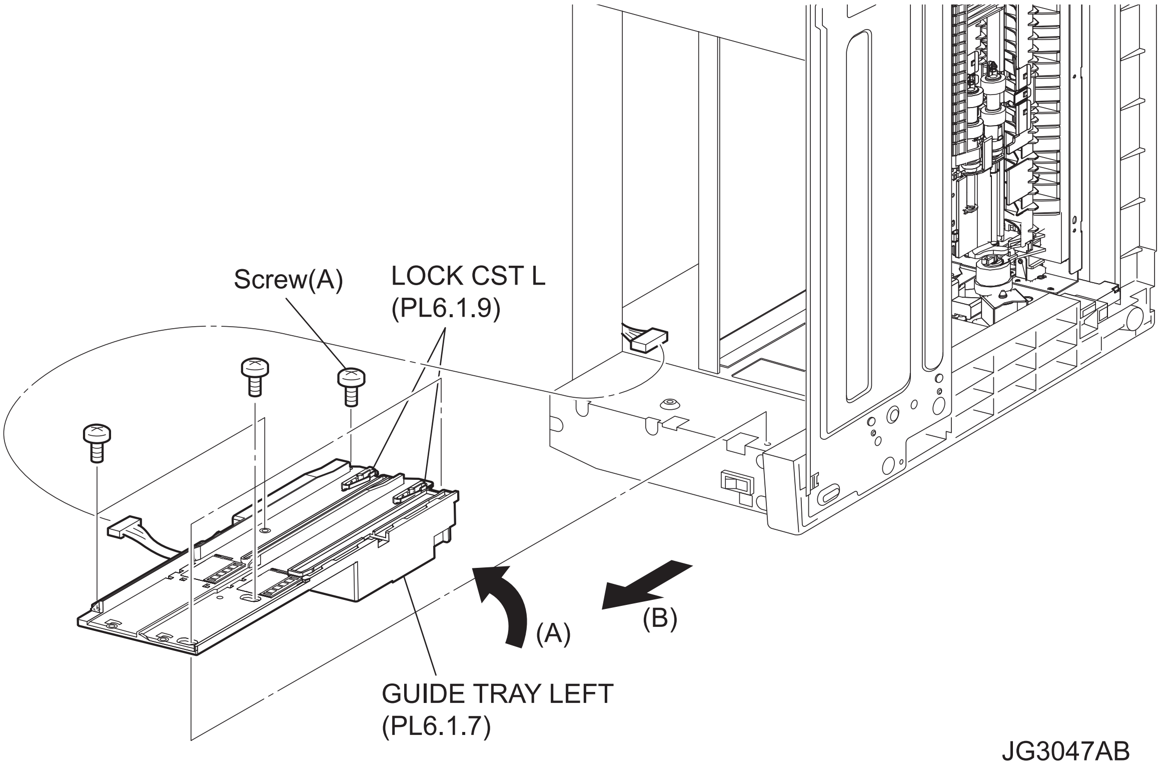
NOTE **When installing the GUIDE TRAY RIGHT, make sure the installing position of the PLATE CST LOCK (PL7.1.6) is in the position shown in the figure, NOTE.**

2) Connect the connector (P/J260) of the HARNESS ASSY LOW PAPER SNR to the GUIDE TRAY RIGHT.
3) Return the printer to the normal use state.
4) Install the COVER FRONT (PL1.1.5). (RRP1.5)
5) Install the COVER TOP (PL1.1.7). (RRP1.4)
6) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
7) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
8) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
9) Install the COVER LEFT (PL1.1.6). (RRP1.3)
10) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
11) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

12) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)
13) Install the EP CARTRIDGE and Paper Cassettes.

RRP7.8 GUIDE TRAY LEFT (PL7.1.7)



Removal

1) Remove the EP CARTRIDGE and Paper Cassettes.
2) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
3) Remove the COVER REAR (PL1.1.3). (RRP1.1)
4) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
5) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
6) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
7) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
8) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
9) Remove the COVER TOP (PL1.1.7). (RRP1.4)
10) Remove the COVER FRONT (PL1.1.5). (RRP1.5)

11) Place the printer down on its left side.
12) Disconnect the HARNESS ASSY LVPS (PL12.1.1) from the connector (P/J1821) of the GUIDE TRAY LEFT.
13) Remove the 6 screws (gold tapping, 8mm x 1, gold, 6mm x 5) securing the GUIDE TRAY LEFT to the frame.
14) Shift the GUIDE TRAY LEFT in the direction of the arrows (A) and (B), and remove it from the frame.

Replacement

1) Shift the GUIDE TRAY LEFT in the opposite direction of the arrows (A) and (B), and install it to the frame.
2) Install the GUIDE TRAY LEFT using the 6 screws (gold tapping, 8mm x 1, gold, 6mm x 5).

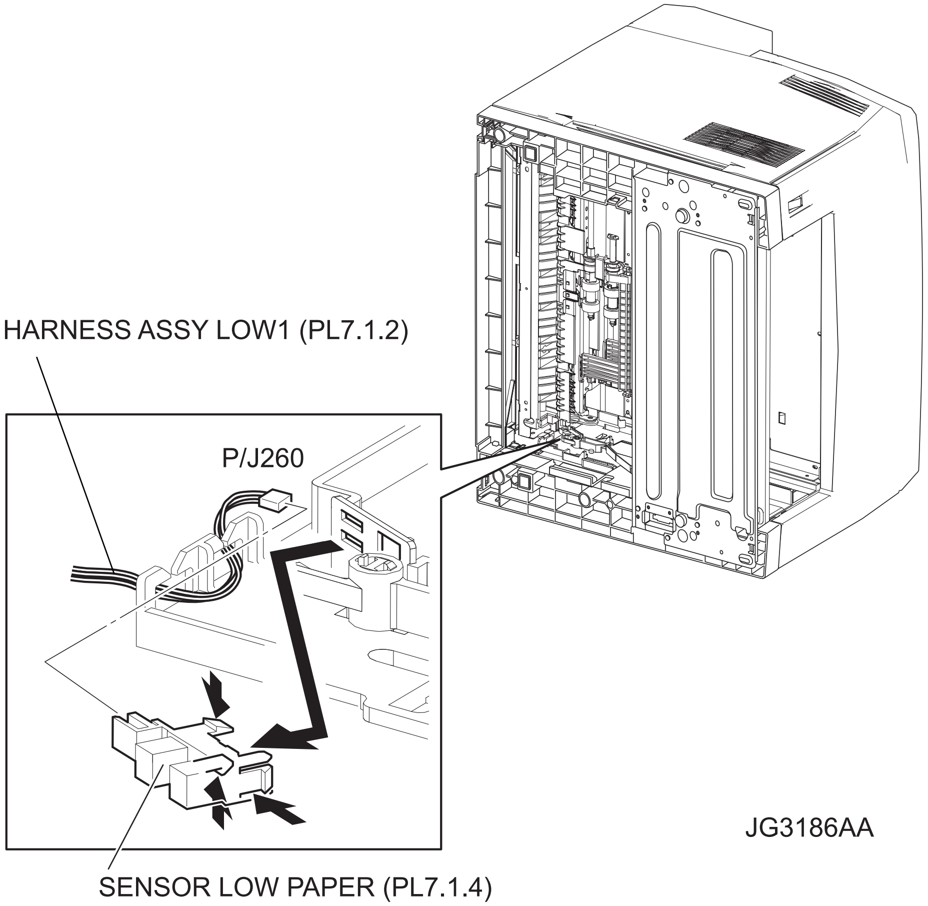
NOTE **Be sure to tighten the screw (gold tapping, 8mm) shown as "Screw (A)" in the figure.**

3) Connect the connector (P/J1821) of the GUIDE TRAY LEFT to the HARNESS ASSY LVPS (PL12.1.1).
4) Return the printer to the normal use state.
5) Install the COVER FRONT (PL1.1.5). (RRP1.5)
6) Install the COVER TOP (PL1.1.7). (RRP1.4)
7) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
8) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
9) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
10) Install the COVER LEFT (PL1.1.6). (RRP1.3)
11) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
12) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

13) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)
14) Install the EP CARTRIDGE and Paper Cassettes.

RRP7.9 PAPER LOW SENSOR (PL7.1.4)



Removal

1) Remove the EP CARTRIDGE and Paper Cassettes.
2) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Place the printer down on its right side.

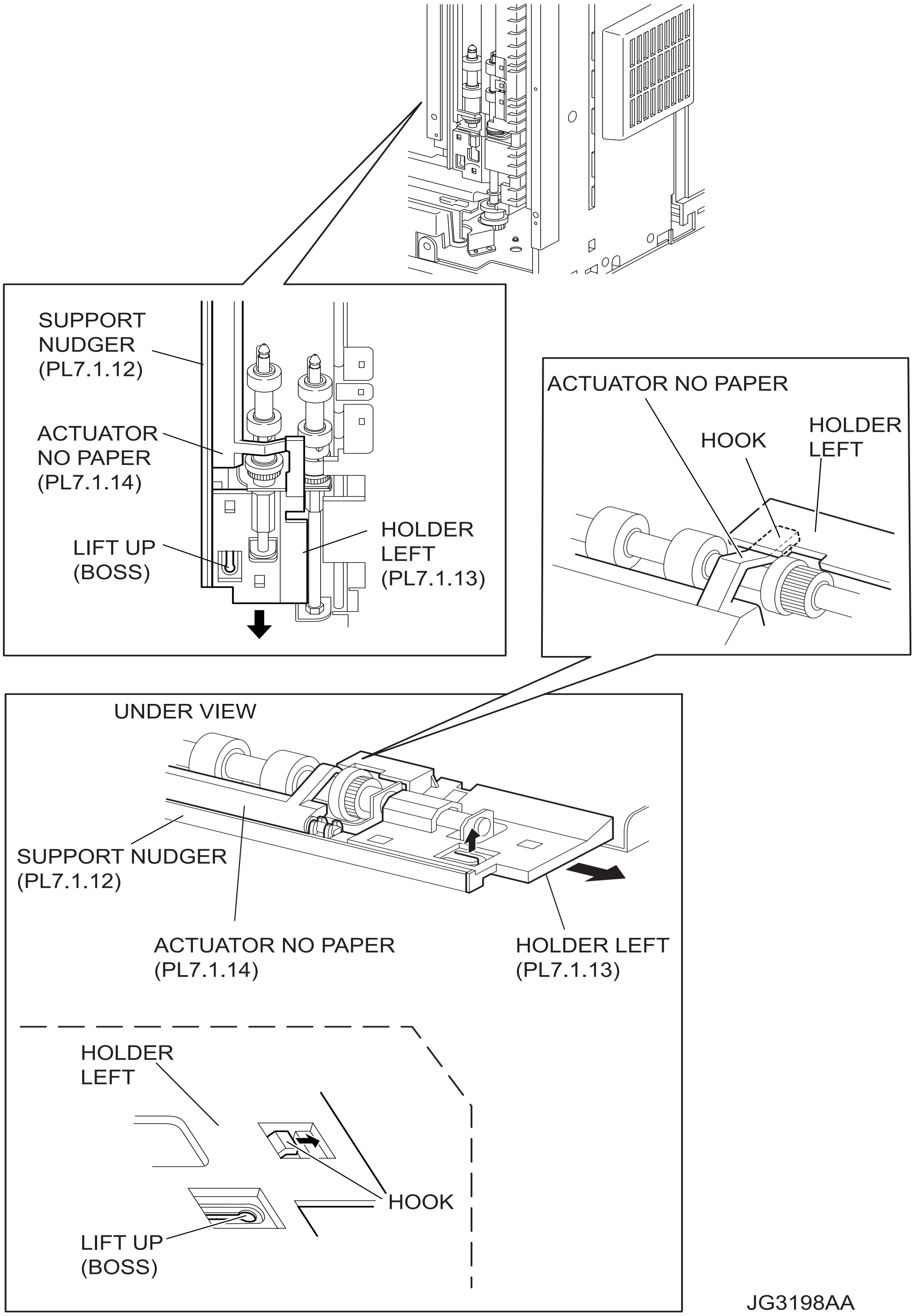
NOTE **Be careful not to scratch the cover, and do not given a shock to the printer from a top.**

5) Disconnect the connector (P/J260) of the HARNESS ASSY LOW 1 (PL7.1.2) from the SENSOR.
6) Release the hooks of the SENSOR, and remove it from the GUIDE TRAY RIGHT (PL7.1.3).

Replacement

1) Install the SENSOR LOE PAPER to the GUIDE TRAY RIGHT (PL7.1.3), and secure it with hooks.
2) Connect the connector (P/J260) of the HARNESS ASSY LOW 1 (PL7.1.2) to the SENSOR.
3) Return the printer to the normal use state.
4) Install the FUSER ASSSY (PL8.1.20). (RRP8.8)
5) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)
6) Install the EP CARTRIDGE and Paper Cassettes.

RRP7.10 ACTUATOR NO PAPER (PL7.1.14)


SUPPORT NUDGER (PL7.1.12)
ACTUATOR NO PAPER (PL7.1.14)
LIFT UP (BOSS)
HOLDER LEFT (PL7.1.13)
ACTUATOR NO PAPER
HOOK
HOLDER LEFT
UNDER VIEW
SUPPORT NUDGER (PL7.1.12)
ACTUATOR NO PAPER (PL7.1.14)
HOLDER LEFT (PL7.1.13)
HOLDER LEFT
HOOK
LIFT UP (BOSS)
JG3198AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
3) Place the printer down on its left side.

NOTE **Be careful not to scratch the cover, and do not given a shock to the printer from a top.**

4) Open the COVER OPEN (PL1.1.2).
5) While lifting up the boss of the HOLDER LEFT (PL7.1.13) at the back of the 550 FEEDER ASSY, shift the HOLDER LEFT in the direction of the arrow to remove 3 hooks.
6) Remove the HOLDER LEFT from the SUPPORT NUDGER (PL7.1.12). At the same time, the ACTUATOR NO PAPER is removed.

Replacement

1) Install the HOLDER LEFT (PL7.1.13) and ACTUATOR NO PAPER to the SUPPORT NUDGER (PL7.1.12).

NOTE **Be sure to install the shafts on both ends of the ACTUATOR NO PAPER into the HOLDER LEFT and SUPPORT NUDGER.**

NOTE **Assemble the hook of the ACTUATOR NO PAPER to the HOLDER LEFT as shown in the figure.**

2) Move the HOLDER LEFT in the opposite direction of the arrow, and secure it to the 550 FEEDER ASSY with the 3 hooks.

NOTE **After installing, move the ACTUATOR NO PAPER with a finger, and make sure that the ACTUATOR NO PAPER operates smoothly.**

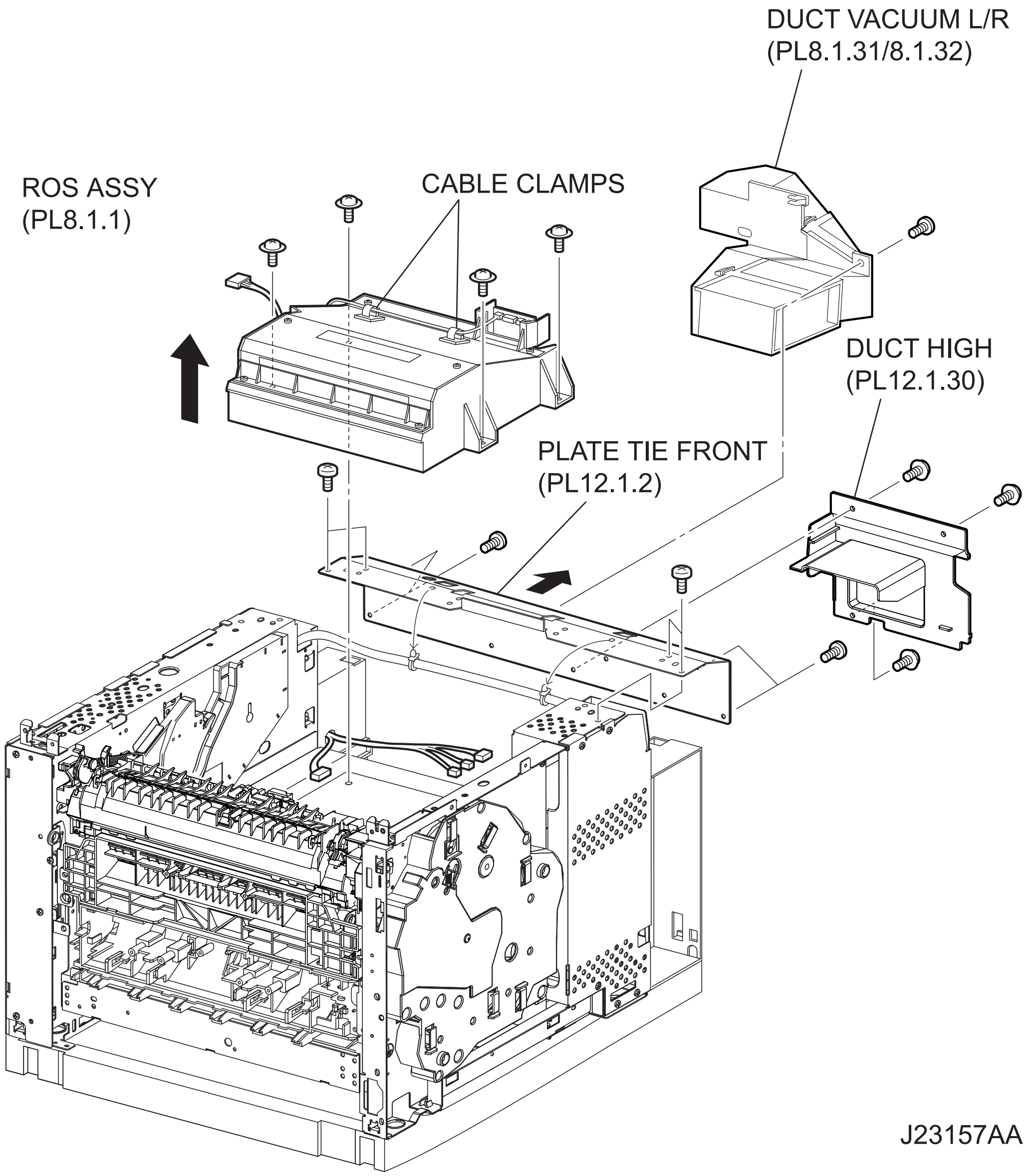
3) Return the printer to the normal use state.
4) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
5) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP8. Xero

RRP8.1 ROS ASSY (PL8.1.1)

NOTE

When performing the ROS ASSY removal and/or installation, be sure to perform the operation on a level and smooth work surface desk or the like. If the operation is performed on a rough and/or inclined work top, the ROS ASSY will be out of alignment.


DUCT VACUUM L/R
(PL8.1.31/8.1.32)
ROS ASSY
(PL8.1.1)
CABLE CLAMPS
DUCT HIGH
(PL12.1.30)
PLATE TIE FRONT
(PL12.1.2)
J23157AA

Removal

1) Remove the COVER REAR 500 (PL10.23.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
7) Remove the COVER TOP (PL1.1.7). (RRP1.4)
8) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
9) Remove the DUCT FRONT (PL8.1.4). (RRP8.2)
10) Remove the 3 screws (silver with flange, 8mm) securing the DUCT HIGH (PL12.1.30), and remove the DUCT HIGH.
11) Remove the 1 screws (silver with flange, 8mm) securing the DUCT VACUUM L/R (PL8.1.31/ 8.1.32), and release the hooks of the DUCT VACUUM L/R, and remove the DUCT VACUUM L/ R.
12) Release the 2 clamps holding the harnesses, from the PLATE TIE FRONT (PL12.1.2).
13) Remove the 8 screws (silver, 6mm) securing the PLATE TIE FRONT to the frame, and remove the PLATE TIE FRONT.
14) Release the 2 clamps holding the harnesses, from the ROS ASSY.
15) Disconnect 4 connectors of the HARNESS ASSY ROS (PL8.1.2).

NOTE **The printed circuit board on the ROS ASSY is fragile, therefore, be sure to hold it with hand when disconnecting the connectors.**

16) Remove the 4 screws (black with flange, 8mm) securing the ROS ASSY to the frame.

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

17) Remove the ROS ASSY.

Replacement

1) Install the ROS ASSY to the frame using the 4 screws (black with flange, 8mm).

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

2) Connect the connectors of the HARNESS ASSY ROS to the printed circuit board on the ROS ASSY.

NOTE **The printed circuit board on the ROS ASSY is fragile, then, be sure to hold it with hand when connecting the connectors.**

3) Secure the harness with the 2 cable clamps on the ROS ASSY.

4) Install the PLATE TIE FRONT (PL12.1.2) to the frame using the 8 screws (silver, 6mm) and tighten firmly.

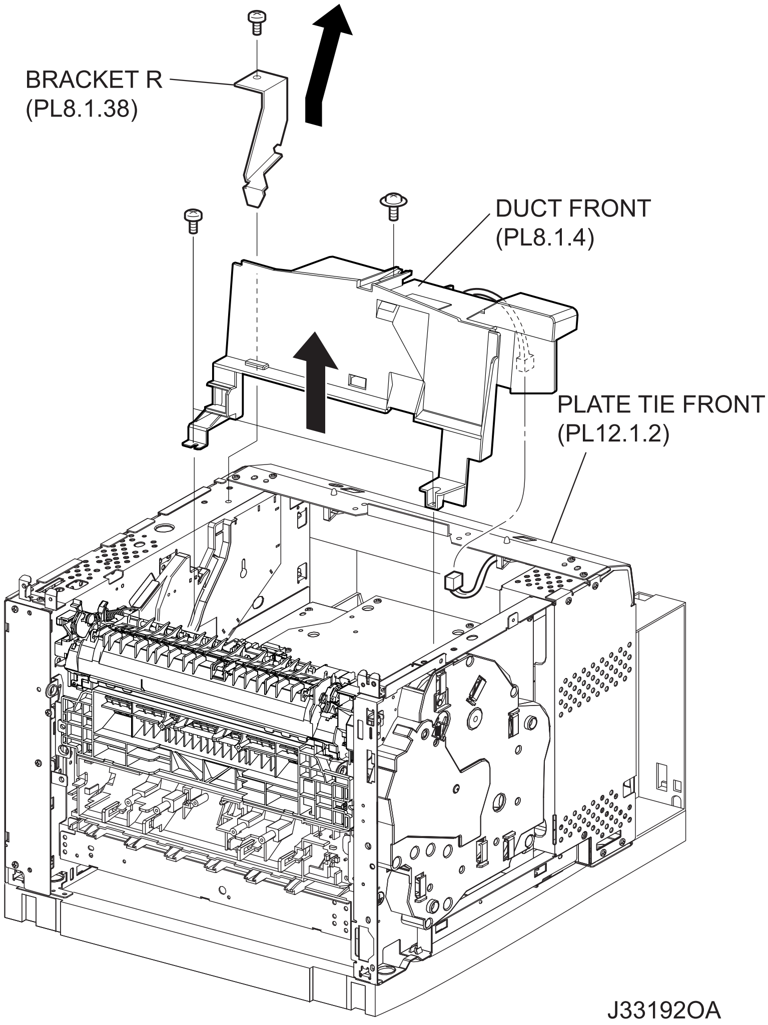
NOTE **Be sure to perform this operation on a level and smooth work top.**

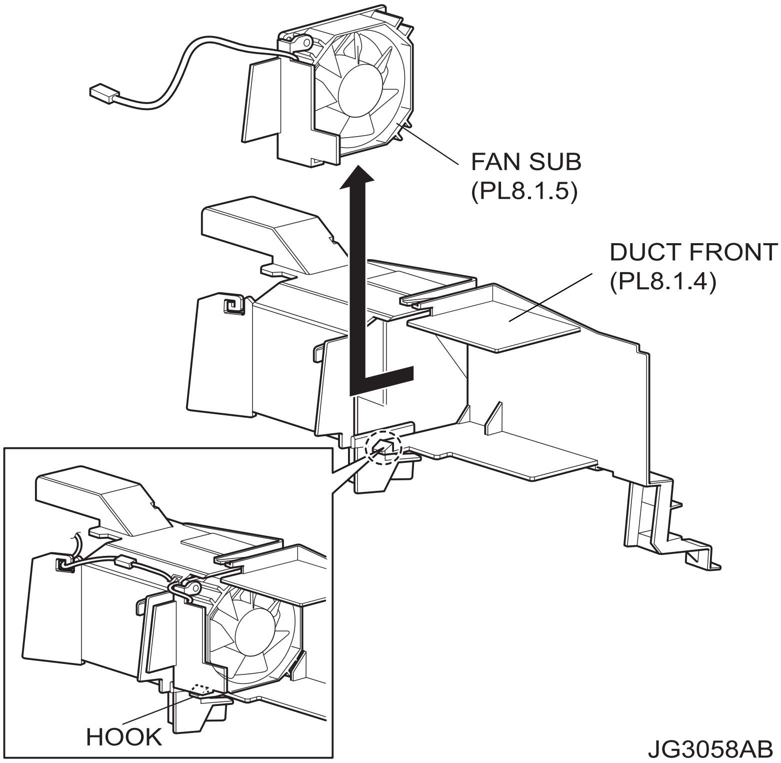
5) Secure the harness to the PLATE TIE FRONT using the 2 clamps.
6) Secure the DUCT VACUUM L/R (PL8.1.31/8.1.32) using the 1 screws (silver with flange, 8mm).
7) Secure the DUCT HIGH (PL12.1.30) using the 3 screws (silver with flange, 8mm).
8) Install the DUCT FRONT (PL8.1.4). (RRP8.2)
9) Install the COVER FRONT (PL1.1.5). (RRP1.5)
10) Install the COVER TOP (PL1.1.7). (RRP1.4)
11) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
12) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
13) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
14) Install the COVER LEFT (PL1.1.6). (RRP1.3)
15) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

16) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP8.2 DUCT FRONT (PL8.1.4), FAN SUB (PL8.1.5)


BRACKET R
(PL8.1.38)
DUCT FRONT
(PL8.1.4)
PLATE TIE FRONT
(PL12.1.2)
J33192OA



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
7) Remove the COVER TOP (PL1.1.7). (RRP1.4)
8) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
9) Remove the screw (silver, 6mm) securing the BRACKET R (PL8.1.38) to the frame.
10) Remove the BRACKET R from the frame and GUIDE ASSY CRU R (PL8.1.25).
11) Disconnect the connector (P/J270) of the FAN SUB from the HARNESS ASSY LVPS (PL12.1.1).
12) Remove the 3 screws (silver tapping with flange, 8mm x1, gold tapping, 8mm x 2) securing the DUCT FRONT.
13) Remove the DUCT FRONT attached with the FAN SUB from the frame by moving it in the direction of the arrow.
14) Release the hook securing the FAN SUB to the DUCT FRONT, and remove the FAN SUB.

Replacement

1) Install the FAN SUB to the DUCT FRONT, and secure it with the hook.

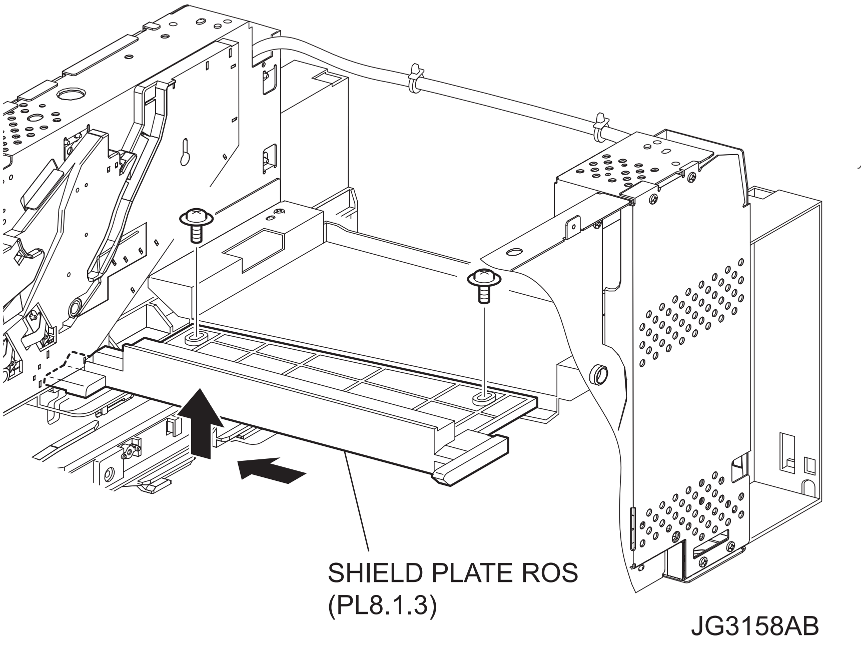
NOTE **When installing the FAN SUB to the DUCT FRONT, be sure to install the FAN SUB so that the label is facing inside and the harness is in the place shown in the figure.**

2) Install the DUCT FRONT attached with the FAN SUB to the frame by moving the opposite direction of the arrow shown in the figure.
3) Install the DUCT FRONT to the frame using the 3 screws (silver tapping with flange, 8mm x1, gold tapping, 8mm x 2).
4) Connect the connector (P/J270) of the FAN SUB to the HARNESS ASSY LVPS (PL12.1.1).
5) Install the BRACKET R to the frame and GUIDE ASSY CRU R.
6) Secure the BRACKET R using the screw (silver, 6mm) to the frame.
7) Install the COVER FRONT (PL1.1.5). (RRP1.5)
8) Install the COVER TOP (PL1.1.7). (RRP1.4)
9) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
10) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
11) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
12) Install the COVER LEFT (PL1.1.6). (RRP1.3)
13) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

14) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP8.3 SHIELD PLATE ROS (PL8.1.3)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2) (RRP10.2)
7) Remove the COVER TOP (PL1.1.7). (RRP1.4)
8) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
9) Remove the DUCT FRONT (PL8.1.4). (RRP8.2)
10) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
11) Remove the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

12) Remove the 2 screws (black with flange, 8mm) securing the SHIELD PLATE ROS to the frame.
13) Move the SHIELD PLATE ROS in the direction of the arrows to remove.

Replacement

1) Install the SHIELD PLATE ROS by moving it in the opposite direction of the arrows.
2) Secure the SHIELD PLATE ROS using the 2 screws (black with flange, 8mm) to the flame.
3) Install the ROS ASSY (PL8.1.1). (RRP8.1)

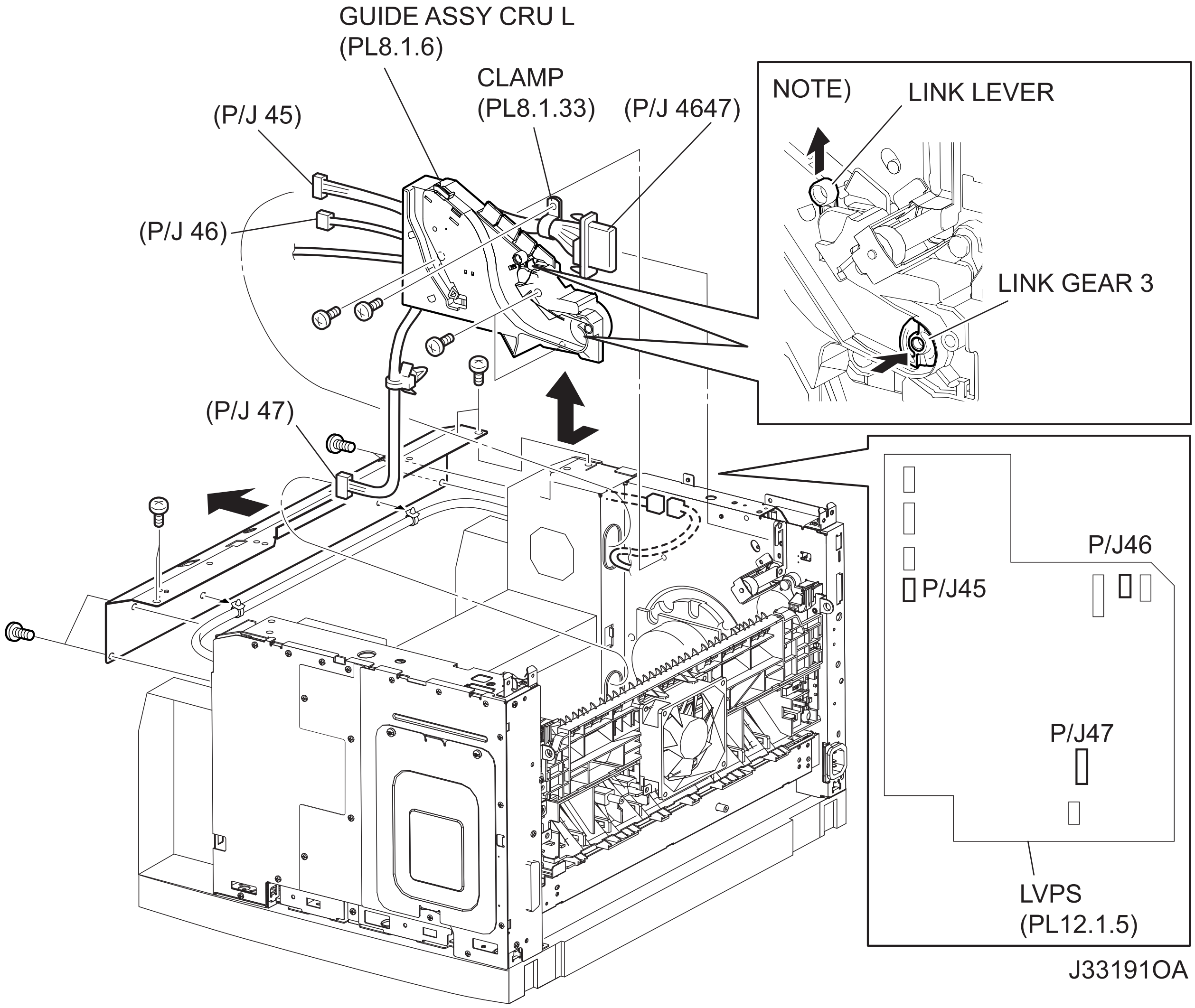
NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

4) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
5) Install the DUCT FRONT (PL8.1.4). (RRP8.2)
6) Install the COVER FRONT (PL1.1.5). (RRP1.5)
7) Install the COVER TOP (PL1.1.7). (RRP1.4)
8) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
9) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
10) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
11) Install the COVER LEFT (PL1.1.6). (RRP1.3)
12) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

13) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP8.4 GUIDE CRU LEFT (PL8.1.15)


GUIDE ASSY CRU L
(PL8.1.6)
CLAMP
(PL8.1.33)
(P/J 4647)
(P/J 45)
(P/J 46)
(P/J 47)
NOTE)
LINK LEVER
LINK GEAR 3
P/J46
P/J45
P/J47
LVPS
(PL12.1.5)
J33191OA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
7) Remove the COVER TOP (PL1.1.7). (RRP1.4)
8) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
9) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
10) Remove the BTR ASSY (PL8.1.21). (RRP8.10)

11) Remove the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
12) Remove the DUCT FRONT (PL8.1.4). (RRP8.2)
13) Remove the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

14) Remove the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
15) While lifting up the 150 FEEDER ASSY, remove the MOTOR COVER (PL11.1.1). (RRP11.1)
16) Remove the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
17) Remove the one screw (gold, 6mm) securing the CLAMP (PL8.1.33) to the frame.
18) Remove the connector (P/J4647) of the HARNESS ASSY FUSER (PL8.1.17) from the frame.
19) Remove the harness clamp which holding the HARNESS ASSY FUSER attached to the GUIDE CRU LEFT to the frame.
20) Disconnect the connector (P/J141) of the INTERLOCK S/W 5V from the HARNESS ASSY LVPS (PL12.1.1).
21) Disconnect the connector (P/J45) of the INTERLOCK S/W 24V from the LVPS (PL12.1.5).
22) Disconnect the connectors (P/J46 and P/J47) of the HARNESS ASSY FUSER from the LVPS.
23) Remove the 3 screws (gold, 6mm) securing the GUIDE CRU LEFT to the frame.
24) Remove the GUIDE CRU LEFT from the frame.

NOTE **When removing GUIDE CRU LEFT, pressing LINK GEAR 3 in the direction of the arrow helps to remove GUIDE CRU LEFT easily.**

Replacement

1) Install the GUIDE CRU LEFT to the frame.

NOTE **When installing, make sure that the LEVER LINK (PL8.1.29) is attached to the GUIDE CRU LEFT.**

2) Install the GUIDE CRU LEFT to the frame using the 3 screws (gold, 6mm).

NOTE **After installing the GUIDE CRU LEFT, touch the LINK GEAR 3 with your finger. Make sure that your finger can feel the LINK GEAR 3 move inward, when the LEVER LINK is pulled up.**

3) Connect the connectors (P/J46 and P/J47) of the HARNESS ASSY FUSER to the LVPS (PL12.1.5).
4) Connect the connector (P/J45) of the INTERLOCK S/W 24V to the LVPS.
5) Connect the connector (P/J141) of the INTERLOCK S/W 5V to the HARNESS ASSY LVPS (PL12.1.1).
6) Secure the HARNESS ASSY FUSER (PL8.1.17) attached to the GUIDE CRU LEFT to the frame using harness clamp.
7) Install the connector (P/J4647) of the HARNESS ASSY FUSER to the frame.
8) Install the CLAMP (PL8.1.33) to the frame using the 1 screw (gold, 6mm).

9) Install the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
10) While lifting up the 150 FEEDER ASSY, install the MOTOR COVER (PL11.1.1). (RRP11.1)
11) Install the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
12) Install the ROS ASSY (PL8.1.1). (RRP8.1)

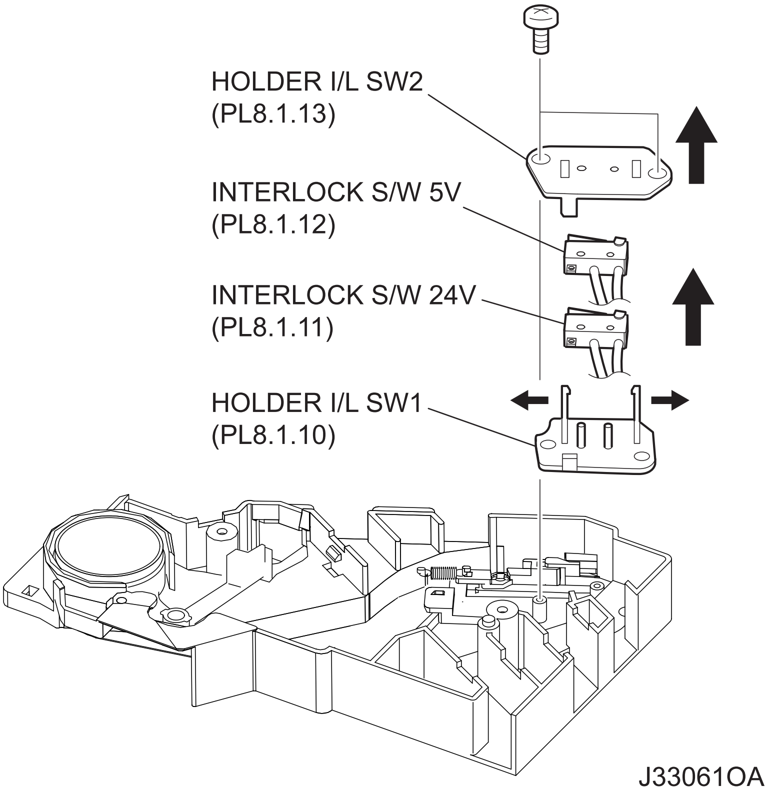
NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

13) Install the DUCT FRONT (PL8.1.4). (RRP8.2)
14) Install the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
15) Install the BTR ASSY (PL8.1.21). (RRP8.10)
16) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
17) Install the COVER FRONT (PL1.1.5). (RRP1.5)
18) Install the COVER TOP (PL1.1.7). (RRP1.4)
19) Install the 500 EXIT ASST (PL10.1.2). (RRP10.2)
20) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
21) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
22) Install the COVER LEFT (PL1.1.6). (RRP1.3)
23) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

24) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP8.5 INTERLOCK S/W 24V (PL8.1.11), INTERLOCK S/W 5V (PL8.1.12)


HOLDER I/L SW2
(PL8.1.13)
INTERLOCK S/W 5V
(PL8.1.12)
INTERLOCK S/W 24V
(PL8.1.11)
HOLDER I/L SW1
(PL8.1.10)
J33061OA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
5) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
6) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
7) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
8) Remove the COVER TOP (PL1.1.7). (RRP1.4)
9) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
10) Remove the BTR ASSY (PL8.1.21). (RRP8.10)
11) Remove the DUCT FRONT (PL8.1.4). (RRP8.2)
12) Remove the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE

Never give any impact to the ROS ASSY with a screwdriver or other tools.

13) Remove the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
14) Remove the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
15) Remove the MOTOR COVER (PL11.1.1). (RRP11.1)
16) Remove the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
17) Remove the GUIDE CRU LEFT (PL8.1.15). (RRP8.4)
18) Remove the COVER GUIDE CRU (PL8.1.16) and HARNESS ASSY FUSER (PL8.1.17) from the GUIDE CRU LEFT. (RRP8.7)
19) Remove the 2 screws (gold tapping, 6mm) securing the HOLDER I/L SW2 (PL8.1.13) to the GUIDE CRU LEFT.
20) Remove the HOLDER I/L SW2.
21) Release the hook of the HOLDER I/L SW1 (PL8.1.10), and remove the INTERLOCK S/W 24V and INTERLOCK S/W 5V.

Replacement

1) Install the INTERLOCK S/W 24V and INTERLOCK S/W 5V to the HOLDER I/L SW1 (PL8.1.10) and secure them with hooks.
2) Install the HOLDER I/L SW2 (PL8.1.13) to the GUIDE CRU LEFT (PL8.1.15) using the 2 screws (gold tapping, 6mm).
3) Install the COVER GUIDE CRU (PL8.1.16) and HARNESS ASSY FUSER (PL8.1.17) to the GUIDE CRU LEFT.
4) Install the GUIDE CRU LEFT. (RRP8.4)

NOTE **When installing, make sure that the LEVER LINK (PL8.1.29) is attached to the GUIDE CRU LEFT.**

NOTE **After installing the GUIDE CRU LEFT, touch the LINK GEAR 3 with your finger. Make sure that your finger can feel the LINK GEAR 3 move inward, when the LEVER LINK is pulled up.**

5) Install the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
6) Install the MOTOR COVER (PL11.1.1). (RRP11.1)
7) Install the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
8) Install the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
9) Install the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

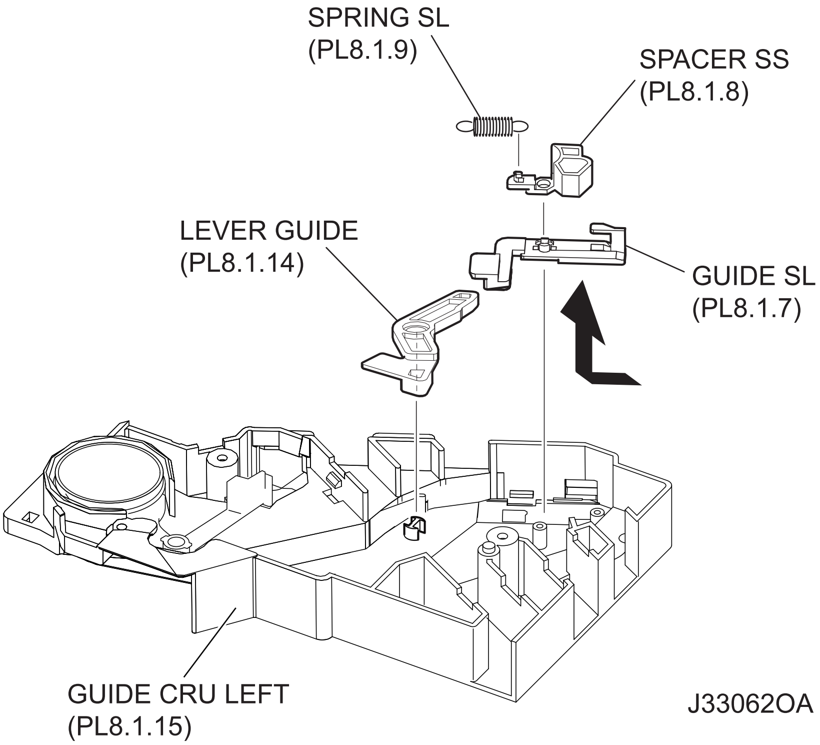
10) Install the DUCT FRONT (PL8.1.4). (RRP8.2)
11) Install the COVER FRONT (PL1.1.5). (RRP1.5)
12) Install the COVER TOP (PL1.1.7). (RRP1.4)
13) Install the 500 EXIT ASST (PL10.1.2). (RRP10.2)
14) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
15) Install the COVER RIGHT (PL1.1.4). (RRP1.2)

16) Install the COVER LEFT (PL1.1.6). (RRP1.3)
17) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
18) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

19) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)
20) Install the BTR ASSY (PL8.1.21). (RRP8.10)

RRP8.6 LEVER GUIDE (PL8.1.14)


SPRING SL
(PL8.1.9)
SPACER SS
(PL8.1.8)
LEVER GUIDE
(PL8.1.14)
GUIDE SL
(PL8.1.7)
GUIDE CRU LEFT
(PL8.1.15)
J33062OA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
5) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
6) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
7) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
8) Remove the COVER TOP (PL1.1.7). (RRP1.4)
9) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
10) Remove the BTR ASSY (PL8.1.21). (RRP8.10)
11) Remove the DUCT FRONT (PL8.1.4). (RRP8.2)
12) Remove the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

13) Remove the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
14) Remove the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
15) Remove the MOTOR COVER (PL11.1.1). (RRP11.1)
16) Remove the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
17) Remove the GUIDE CRU LEFT (PL8.1.15). (RRP8.4)
18) Remove the COVER GUIDE CRU (PL8.1.16) and HARNESS ASSY FUSER (PL8.1.17) from the GUIDE CRU LEFT. (RRP8.7)
19) Remove the INTERLOCK S/W 24V (PL8.1.11) and INTERLOCK S/W 5V (PL8.1.12). (RRP8.5)
20) Remove the SPRING SL (PL8.1.9) from the GUIDE CRU LEFT.
21) Remove the SPACER SS (PL8.1.8) from the GUIDE CRU LEFT.
22) Remove the GUIDE SL (PL8.1.7) from the GUIDE CRU LEFT.
23) Remove the LEVER GUIDE from the GUIDE CRU LEFT.

Replacement

1) Install the LEVER GUIDE to the GUIDE CRU LEFT(PL8.1.15).
2) Install the GUIDE SL (PL8.1.7) to the GUIDE CRU LEFT.
3) Install the SPACER SS (PL8.1.8) to the GUIDE CRU LEFT.
4) Install the SPRING SL (PL8.1.9) to the GUIDE CRU LEFT.
5) Install the INTERLOCK S/W 24V (PL8.1.11) and INTERLOCK S/W 5V (PL8.1.12). (RRP8.5)
6) Install the COVER GUIDE CRU (PL8.1.16) and HARNESS ASSY FUSER (PL8.1.17). (RRP8.7)
7) Install the GUIDE CRU LEFT (PL8.1.15). (RRP8.4)

NOTE **When installing, make sure that the LEVER LINK (PL8.1.29) is attached to the GUIDE CRU LEFT.**

NOTE **After installing the GUIDE CRU LEFT, touch the LINK GEAR 3 with your finger. Make sure that your finger can feel the LINK GEAR 3 move inward, when the LEVER LINK is pulled up.**

8) install the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
9) Install the MOTOR COVER (PL11.1.1). (RRP11.1)
10) Install the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
11) Install the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
12) Install the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

13) Install the DUCT FRONT (PL8.1.4). (RRP8.2)
14) Install the COVER FRONT (PL1.1.5). (RRP1.5)
15) Install the COVER TOP (PL1.1.7). (RRP1.4)
16) Install the 500 EXIT ASST (PL10.1.2). (RRP10.2)
17) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
18) Install the COVER RIGHT (PL1.1.4). (RRP1.2)

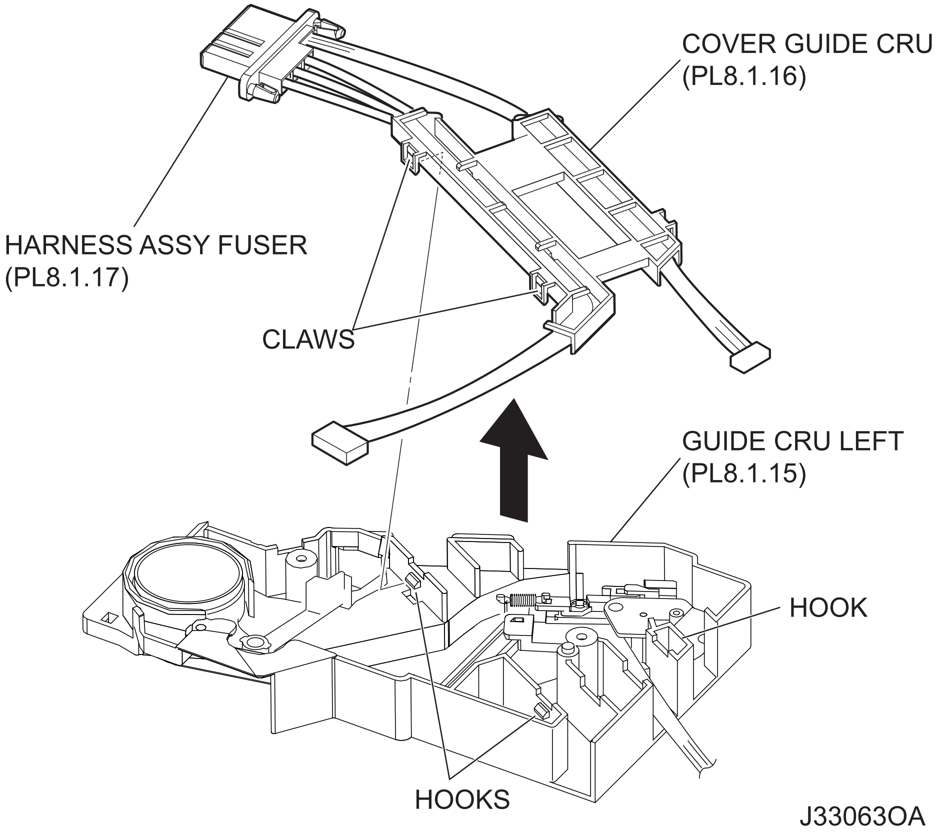
19) Install the COVER LEFT (PL1.1.6). (RRP1.3)
20) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
21) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE

There are 2 kinds of screws, make sure they are put in the right place.

22) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)
23) Install the BTR ASSY (PL8.1.21). (RRP8.10)

RRP8.7 HARNESS ASSY FUSER (PL8.1.17)


COVER GUIDE CRU
(PL8.1.16)
HARNESS ASSY FUSER
(PL8.1.17)
CLAWS
GUIDE CRU LEFT
(PL8.1.15)
HOOK
HOOKS
J33063OA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
5) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
6) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
7) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
8) Remove the COVER TOP (PL1.1.7). (RRP1.4)
9) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
10) Remove the BTR ASSY (PL8.1.21). (RRP8.10)
11) Remove the DUCT FRONT (PL8.1.4). (RRP8.2)
12) Remove the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

13) Remove the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
14) Remove the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
15) Remove the MOTOR COVER (PL11.1.1). (RRP11.1)
16) Remove the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
17) Remove the GUIDE CRU LEFT (PL8.1.15). (RRP8.4)
18) Release the hooks securing the COVER GUIDE CRU (PL8.1.16) to the GUIDE CRU LEFT, and remove the COVER GUIDE CRU together with the HARNESS ASSY FUSER.

NOTE **Be careful handling the hooks of the GUIDE CRU LEFT. They are fragile and could break if widen them to much.**

Replacement

1) Install the COVER GUIDE CRU (PL8.1.16) together with the HARNESS ASSY FUSER to the GUIDE CRU LEFT (PL18.1.15).
2) Install the GUIDE CRU LEFT (PL8.1.15). (RRP8.4)

NOTE **When installing, make sure that the LEVER LINK (PL8.1.29) is attached to the GUIDE CRU LEFT.**

NOTE **After installing the GUIDE CRU LEFT, touch the LINK GEAR 3 with your finger. Make sure that your finger can feel the LINK GEAR 3 move inward, when the LEVER LINK is pulled up.**

3) install the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
4) Install the MOTOR COVER (PL11.1.1). (RRP11.1)
5) Install the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
6) Install the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
7) Install the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

8) Install the DUCT FRONT (PL8.1.4). (RRP8.2)
9) Install the COVER FRONT (PL1.1.5). (RRP1.5)
10) Install the COVER TOP (PL1.1.7). (RRP1.4)
11) Install the 500 EXIT ASST (PL10.1.2). (RRP10.2)
12) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
13) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
14) Install the COVER LEFT (PL1.1.6). (RRP1.3)
15) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
16) Install the COVER REAR (PL1.1.3). (RRP1.1)

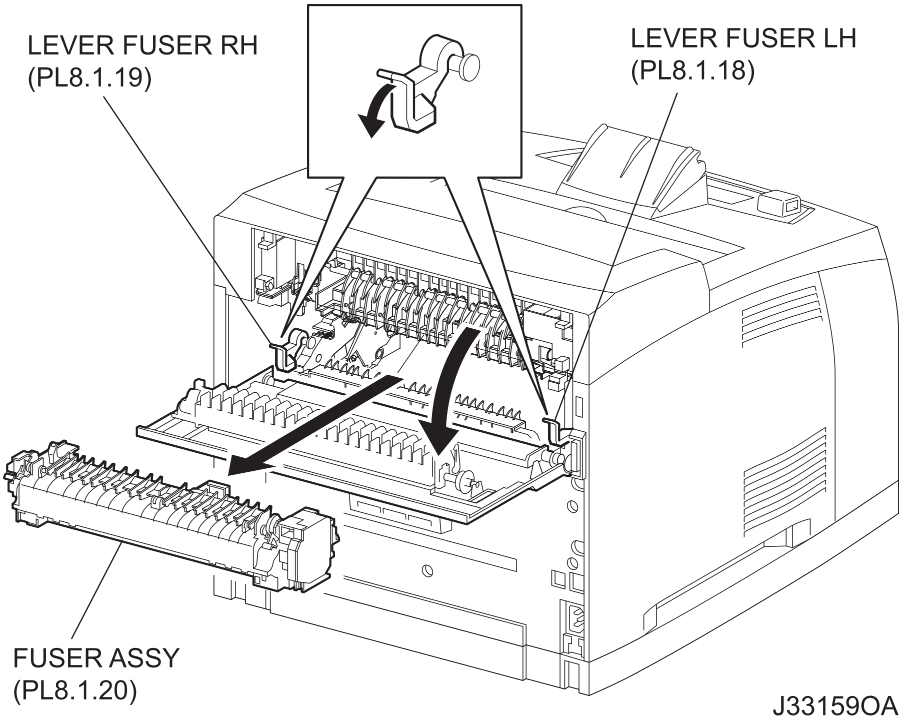
NOTE

There are 2 kinds of screws, make sure they are put in the right place.

17) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

18) Install the BTR ASSY (PL8.1.21). (RRP8.10)

RRP8.8 FUSER ASSY (PL8.1.20)



Removal

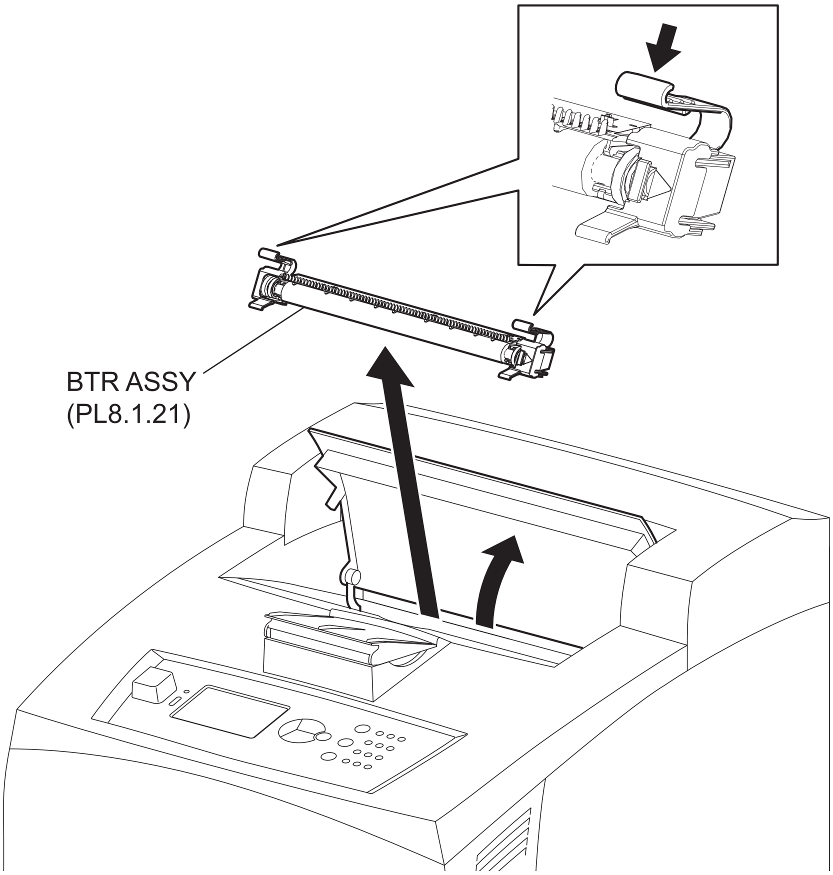
NOTE **Before performing the following procedures, make sure that the FUSER ASSY was cooled enough.**

1) Open the COVER REAR 500 (PL10.2.21).
2) Push down the LEVER FUSER LH (PL8.1.18) and LEVER FUSER RH (PL8.1.19) in the direction of the arrow to release the lock of the FUSER ASSY.
3) Shift the FUSER ASSY in the direction of the arrow, and remove it from the printer.

Replacement

1) Shift the FUSER ASSY in the opposite direction of the arrow, and install it to the printer.
2) Lock the FUSER ASSY by pulling up the LEVER FUSER LH (PL8.1.18) and LEVER FUSER RH (PL8.1.19).
3) Close the COVER REAR 500 (PL10.2.21).

RRP8.10 BTR ASSY (PL8.1.21)]



Removal

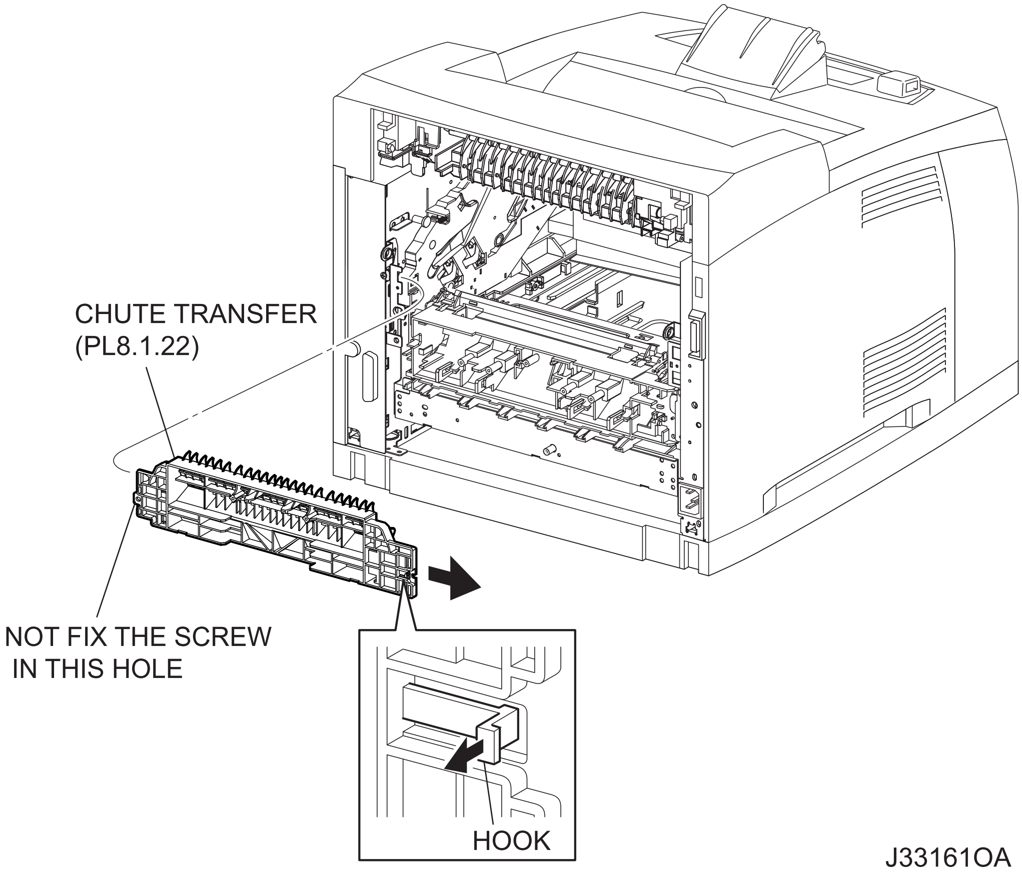
1) Open the COVER OPEN (PL1.1.2).
2) Pinch the hooks of both ends of the BTR ASSY, and remove it from the printer.

NOTE **Pay extra care in handling of the BTR ASSY, not to give any stain or damage.**

Replacement

1) Pinch the hooks of both ends of the BTR ASSY, and install it to the printer.
2) Close the COVER OPEN (PL1.1.2).

RRP8.11 CHUTE TRANSFER (PL8.1.22)


CHUTE TRANSFER
(PL8.1.22)
NOT FIX THE SCREW
IN THIS HOLE
HOOK
J33161OA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Remove the BTR ASSY (PL8.1.21). (RRP8.10)
5) Release the hook of the CHUTE TRANSFER.
6) Shift the CHUTE TRANSFER in the direction of the arrow, and remove it from the frame.

Replacement

1) Shift the CHUTE TRANSFER in the opposite direction of the arrow to install the frame, and secure it using a hook.

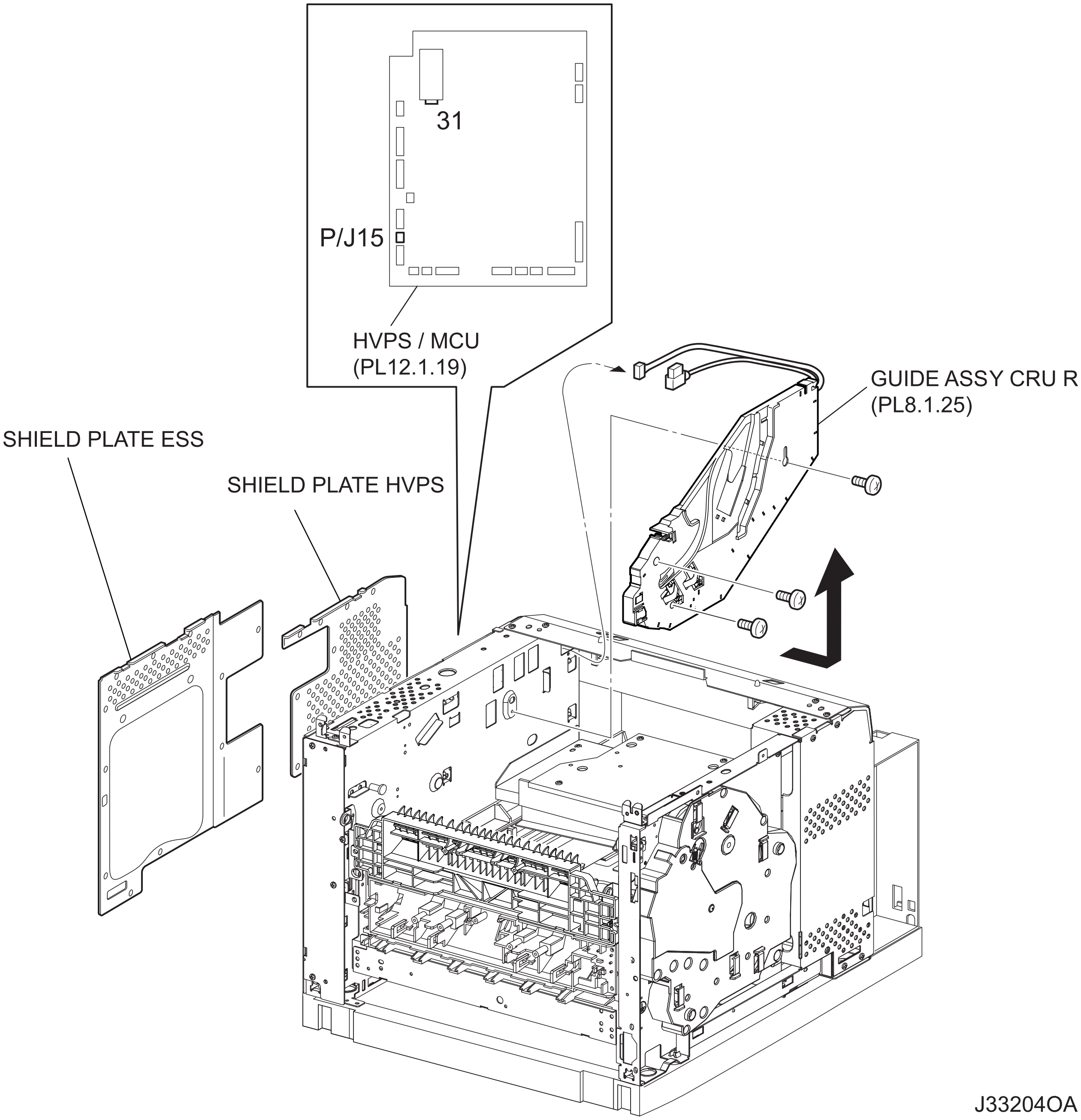
NOTE **Do not tighten the screw to the left side hole of the CHUTE TRANSFER.**

2) Install the BTR ASSY (PL8.1.21). (RRP8.10)
3) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

5) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP8.13 GUIDE ASSY CRU R (PL8.1.25)


31
P/J15
HVPS / MCU
(PL12.1.19)
GUIDE ASSY CRU R
(PL8.1.25)
SHIELD PLATE ESS
SHIELD PLATE HVPS
J33204OA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)

3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
5) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
6) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
7) Remove the 500 EXIT ASST (PL10.1.2). (RRP10.2)
8) Remove the COVER TOP (PL1.1.7). (RRP1.4)
9) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
10) Remove the BTR ASSY (PL8.1.21). (RRP8.10)
11) Remove the SHIELD ASSY ESS (PL12.1.14). (RRP12.7)
12) Remove the SHIELD PLATE HVPS (PL12.1.18). (RRP12.9)
13) Remove the DUCT FRONT (PL8.1.4). (RRP8.2)
14) Disconnect the connector (P/J31) of the GUIDE ASSY CRU R from the HVPS/MCU (PL12.1.19).
15) Disconnect the connector (P/J15) of the HARNESS ASSY ANT from the HVPS/MCU.
16) Remove the 3 screws (silver, 6mm) securing the GUIDE ASSY CRU R to the frame.
17) Pull out the harness of the GUIDE ASSY CRU R from the frame.
18) Remove the GUIDE ASSY CRU R.

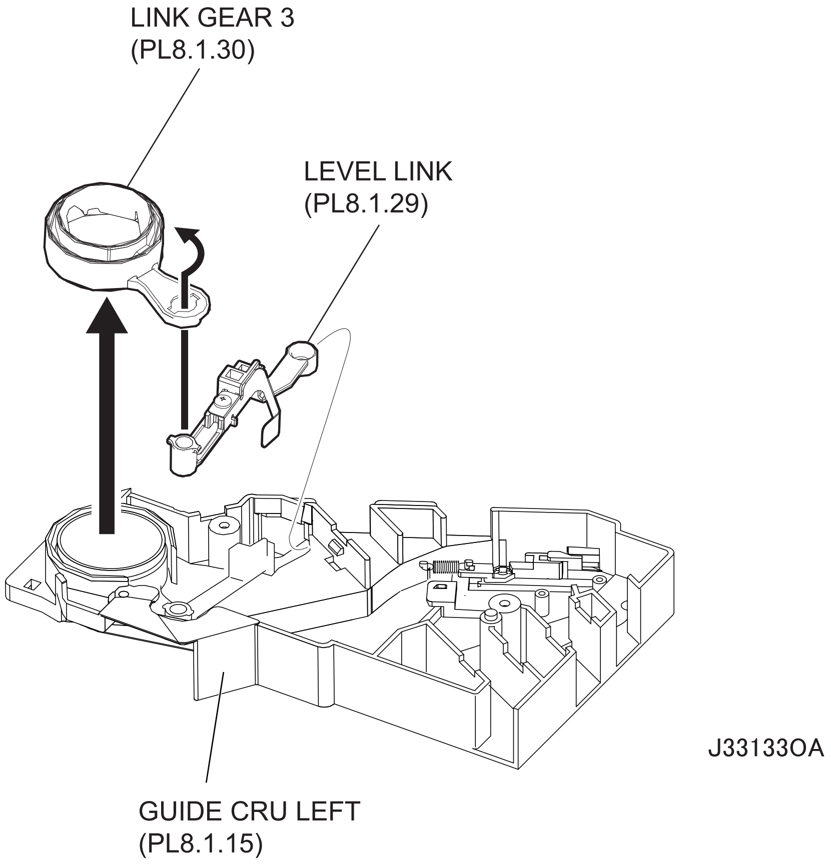
Replacement

1) Install the GUIDE ASSY CRU R.
2) Put the harness of the GUIDE ASSY CRU R to the hole of the frame.
3) Install the GUIDE ASSY CRU R to the frame using the 3 screws (silver, 6mm).
4) Connect the connector (P/J15) of the HARNESS ASSY ANT to the HVPS/MCU (PL12.1.19).
5) Connect the connector (P/J31) of the GUIDE ASSY CRU R to the HVPS/MCU.
6) Install the DUCT FRONT (PL8.1.4). (RRP8.2)
7) Install the SHIELD PLATE HVPS (PL12.1.18). (RRP12.9)
8) Install the SHIELD ASSY ESS (PL12.1.14). (RRP12.7)
9) Install the COVER FRONT (PL1.1.5). (RRP1.5)
10) Install the COVER TOP (PL1.1.7). (RRP1.4)
11) Install the 500 EXIT ASST (PL10.1.2). (RRP10.2)
12) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
13) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
14) Install the COVER LEFT (PL1.1.6). (RRP1.3)
15) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
16) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

17) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)
18) Install the BTR ASSY (PL8.1.21). (RRP8.10)

RRP8.14 LEVER LINK (PL8.1.29), LINK GEAR 3(PL8.1.30)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
5) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
6) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
7) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
8) Remove the COVER TOP (PL1.1.7). (RRP1.4)
9) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
10) Remove the BTR ASSY (PL8.1.21). (RRP8.10)
11) Remove the DUCT FRONT (PL8.1.4). (RRP8.2)
12) Remove the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

13) Remove the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
14) Remove the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
15) Remove the MOTOR COVER (PL11.1.1). (RRP11.1)
16) Remove the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
17) Remove the GUIDE CRU LEFT (PL8.1.15). (RRP8.4)
18) Remove the COVER GUIDE CRU (PL8.1.16) and HARNESS ASSY FUSER (PL8.1.17) from the GUIDE CRU LEFT. (RRP8.7)
19) Remove the LEVER LINK and LINK GEAR 3.

Replacement

1) Assemble the LEVER LINK and LINK GEAR 3 as shown in the figure, and install them to the GUIDE CRU LEFT (PL8.1.15).
2) Install the COVER GUIDE CRU (PL8.1.16) and HARNESS ASSY FUSER (PL8.1.17) to the GUIDE CRU LEFT. (RRP8.7)
3) Install the GUIDE CRU LEFT. (RRP8.4)

NOTE **When installing, make sure that the LEVER LINK (PL8.1.29) is attached to the GUIDE CRU LEFT.**

NOTE **After installing the GUIDE CRU LEFT, touch the LINK GEAR 3 with your finger. Make sure that your finger can feel the LINK GEAR 3 move inward, when the LEVER LINK is pulled up.**

4) Install the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
5) Install the MOTOR COVER (PL11.1.1). (RRP11.1)
6) Install the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
7) Install the he SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
8) Install the ROS ASSY (PL8.1.1). (RRP8.1)

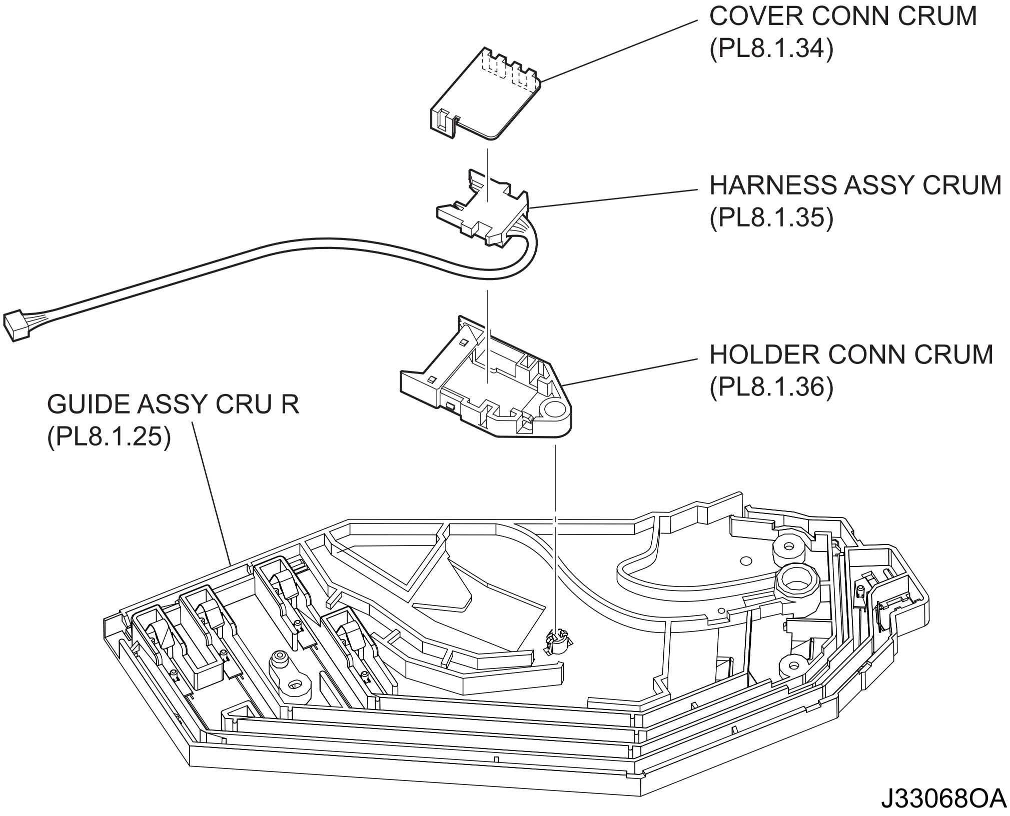
NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

9) Install the DUCT FRONT (PL8.1.4). (RRP8.2)
10) Install the COVER FRONT (PL1.1.5). (RRP1.5)
11) Install the COVER TOP (PL1.1.7). (RRP1.4)
12) Install the 500 EXIT ASST (PL10.1.2). (RRP10.2)
13) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
14) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
15) Install the COVER LEFT (PL1.1.6). (RRP1.3)
16) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
17) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

18) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)
19) Install the BTR ASSY (PL8.1.21). (RRP8.10)

RRP8.15 HARNESS ASSY CRUM (PL8.1.35)


COVER CONN CRUM
(PL8.1.34)
HARNESS ASSY CRUM
(PL8.1.35)
HOLDER CONN CRUM
(PL8.1.36)
GUIDE ASSY CRU R
(PL8.1.25)
J33068OA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
5) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
6) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
7) Remove the 500 EXIT ASST (PL10.1.2. (RRP10.2)
8) Remove the COVER TOP (PL1.1.7). (RRP1.4)
9) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
10) Remove the BTR ASSY (PL8.1.21). (RRP8.10)
11) Remove the DUCT FRONT (PL8.1.4). (RRP8.2)
12) Remove the GUIDE ASSY CRU R (PL8.1.25). (RRP8.13)
13) Release the harness of the HARNESS ASSY CRUM (PL8.1.35) from the hooks of the GUIDE ASSY CRU R.

14) Release the hook that fixes the HOLDER CONN CRUM (PL8.1.36), remove the HOLDER CONN CRUM from the GUIDE ASSY CRU R together with HARNESS ASSY CRUM and COVER CONN CRUM (PL8.1.34).
15) Release the 3 hooks of the COVER CONN CRUM, remove the COVER CONN CRUM from the HOLDER CONN CRUM.
16) Release the harness of the HARNESS ASSY CRUM from the hook of the HOLDER CONN CRUM, remove the HARNESS ASSY CRUM from the HOLDER CONN CRUM.

Replacement

1) Install the HARNESS ASSY CRUM (PL8.1.35) to the HOLDER CONN CRUM (PL8.1.36), route the harness of HARNESS ASSY CRUM through the hook of the HOLDER CONN CRUM.
2) Install the COVER CONN CRUM (PL8.1.34) to the HOLDER CONN CRUM, and secure it using the 3 hooks.
3) Secure the HOLDER CONN CRUM to the GUIDE ASSY CRU R using a hook.
4) Route the harness of the HARNESS ASSY CRUM through the hooks of the GUIDE ASSY CRU R.
5) Install the GUIDE ASSY CRU R (PL8.1.25). (RRP8.13)
6) Install the DUCT FRONT (PL8.1.4). (RRP8.2)
7) Install the COVER FRONT (PL1.1.5). (RRP1.5)
8) Install the COVER TOP (PL1.1.7). (RRP1.4)
9) Install the 500 EXIT ASST (PL10.1.2). (RRP10.2)
10) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
11) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
12) Install the COVER LEFT (PL1.1.6). (RRP1.3)
13) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
14) Install the COVER REAR (PL1.1.3). (RRP1.1)

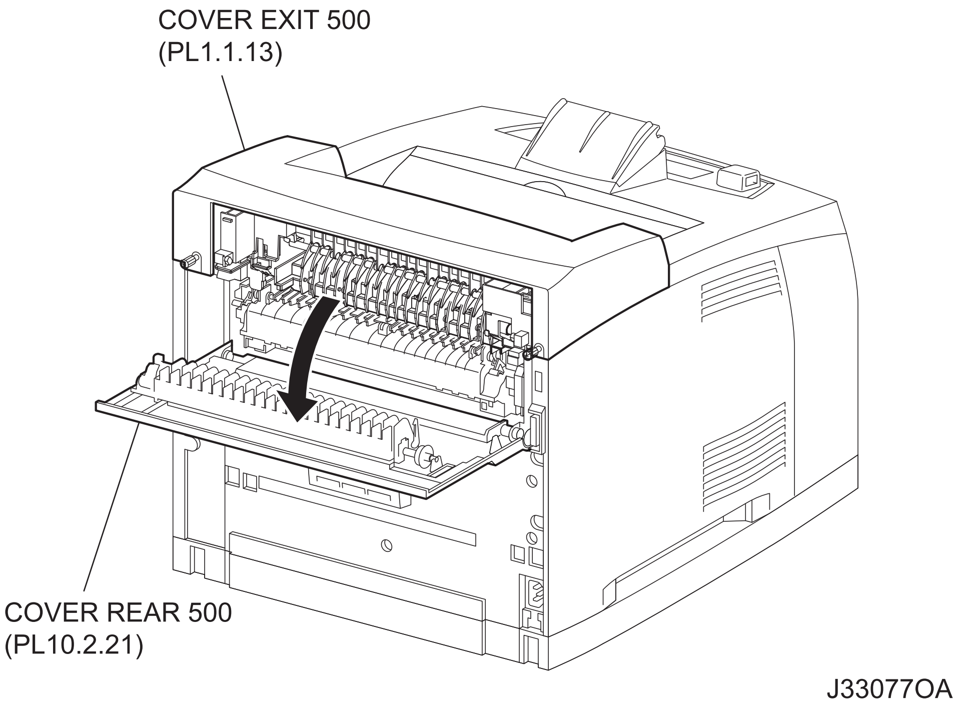
NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

15) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)
16) Install the BTR ASSY (PL8.1.21). (RRP8.10)

RRP9. Blank

RRP10. 500 Paper Exit & Option Face Up Tray

RRP10.1 COVER EXIT 500 (PL1.1.13)


COVER EXIT 500
(PL1.1.13)
COVER REAR 500
(PL10.2.21)
J33077OA

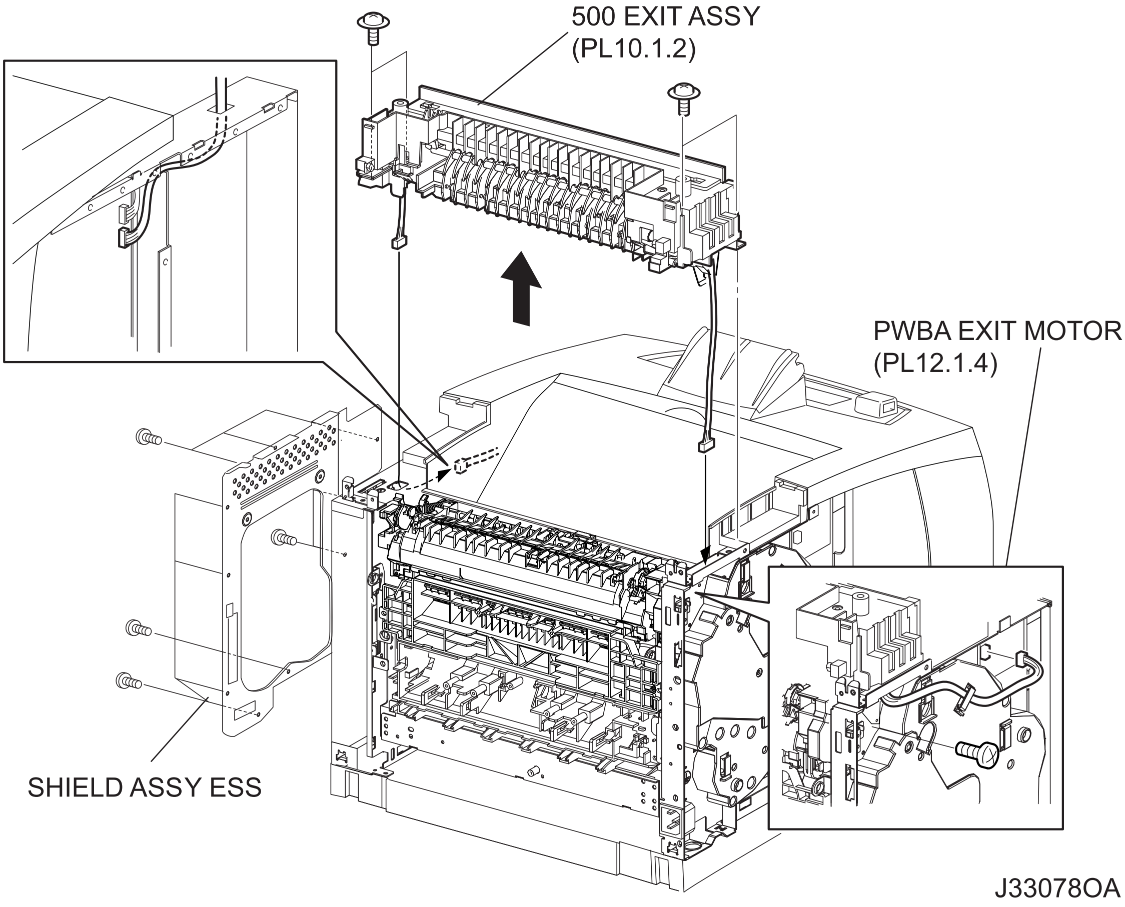
Removal

1) Open the COVER REAR 500 (PL10.2.21).
2) Remove the 2 screws securing the COVER EXIT 500, and remove the it from the printer.

Replacement

1) Install the COVER EXIT 500 to the printer, and secure it with 2 screws on both sides.
2) Close the COVER REAR 500 (PL10.2.21).

RRP10.2 500 EXIT ASSY (PL10.1.2)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the SHIELD ASSY ESS (PL12.1.14). (RRP12.7)
7) Disconnect the connector (P/J29) of the HARNESS ASSY EXIT SNR from the HVPS/MCU (PL12.1.19).
8) Disconnect the connector (P/J103) of the MOTOR ASSY EXIT from the PWBA EXIT MOTOR (PL12.1.4).
9) Remove the 12 screws (silver, 6mm) securing the 500 EXIT ASSY to the printer.
10) Remove the 500 EXIT ASSY.

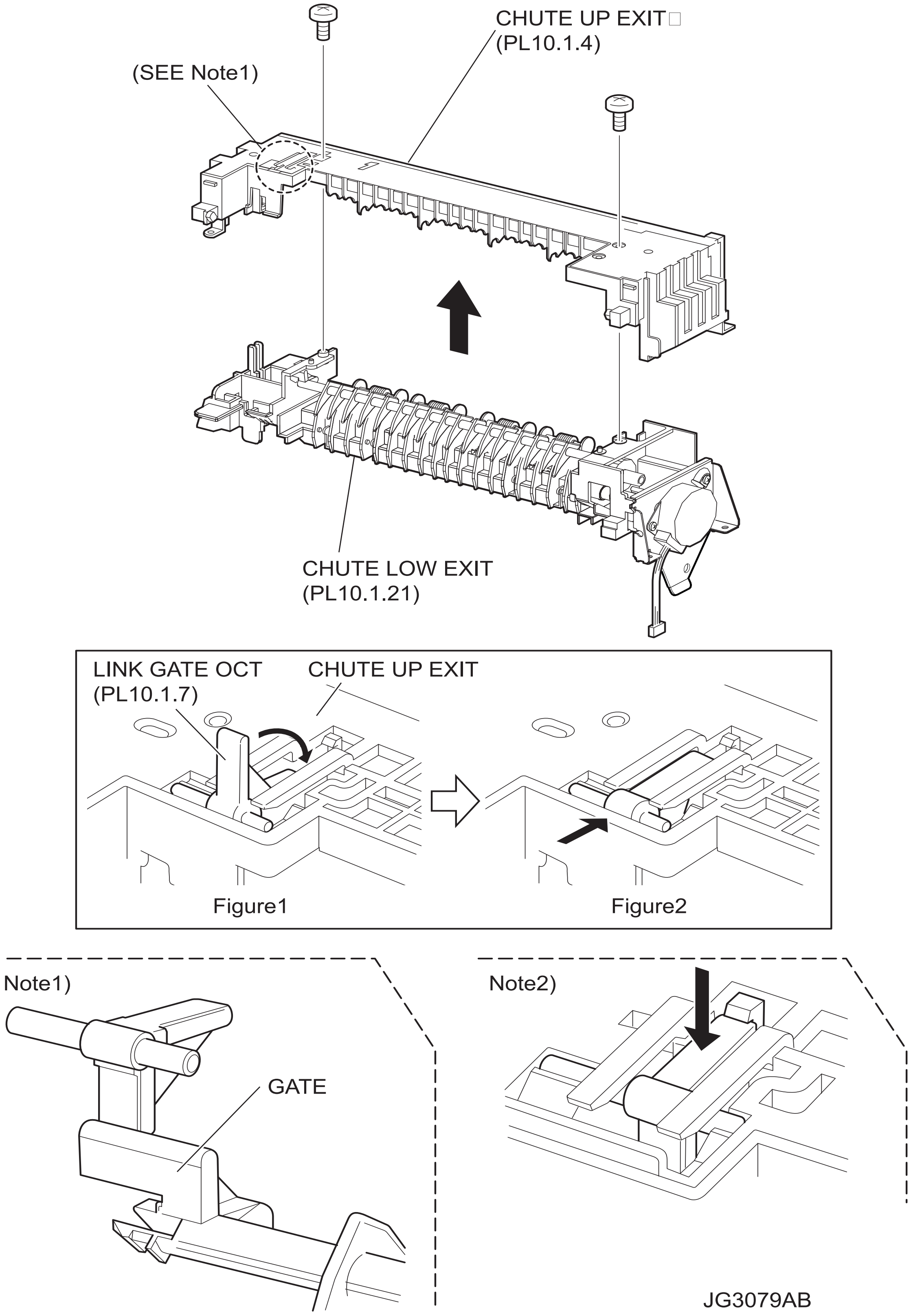
Replacement

1) Put the harnesses of the MOTOR ASSY EXIT and SENSOR into the hole on the frame.
2) Install the 500 EXIT ASSY using the 12 screws (silver, 6mm).
3) Connect the connector (P/J103) of the MOTOR ASSY EXIT to the PWBA EXIT MOTOR (PL12.1.4).
4) Connect the connector (P/J29) of the HARNESS ASSY EXIT SNR to the HVPS/MCU (PL12.1.19).
5) Install the SHIELD ASSY ESS (PL12.1.14). (RRP12.7)
6) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
7) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
8) Install the COVER LEFT (PL1.1.6). (RRP1.3)
9) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

10) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP10.3 CHUTE UP EXIT (PL10.1.4), CHUTE LOW EXIT (PL10.1.21)


CHUTE UP EXIT
(PL10.1.4)
(SEE Note1)
CHUTE LOW EXIT
(PL10.1.21)
LINK GATE OCT
(PL10.1.7)
CHUTE UP EXIT
Figure1
Figure2
Note1)
GATE
Note2)
JG3079AB

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
7) Remove the 2 screws (gold tapping, 8mm) securing the CHUTE UP EXIT to the CHUTE LOW EXIT.
8) Separate the CHUTE UP EXIT and CHUTE LOW EXIT.

Replacement

1) Remove the LINK GATE OCT (PL10.1.7) assembled into the removed CHUTE UP EXIT.
2) Secure the CHUTE UP EXIT to the CHUTE LOW EXIT using the 2 screws (gold tapping, 8mm).
3) Put the LINK GATE OCT under the 2 arms of the CHUTE UP EXIT as shown in figure 1, and turn it in the direction of the arrow.
4) Push the LINK GATE OCT in the direction of the arrow shown in the figure 2 as far as it will go.

NOTE **After installing, make sure that the LINK GATE OCT is placed at the back side of the GATE. (Note1)**

NOTE **After installing, make sure that the tip of the LINK GATE OCT is placed under the hook of the CHUTE LOW EXIT. (Note2)**

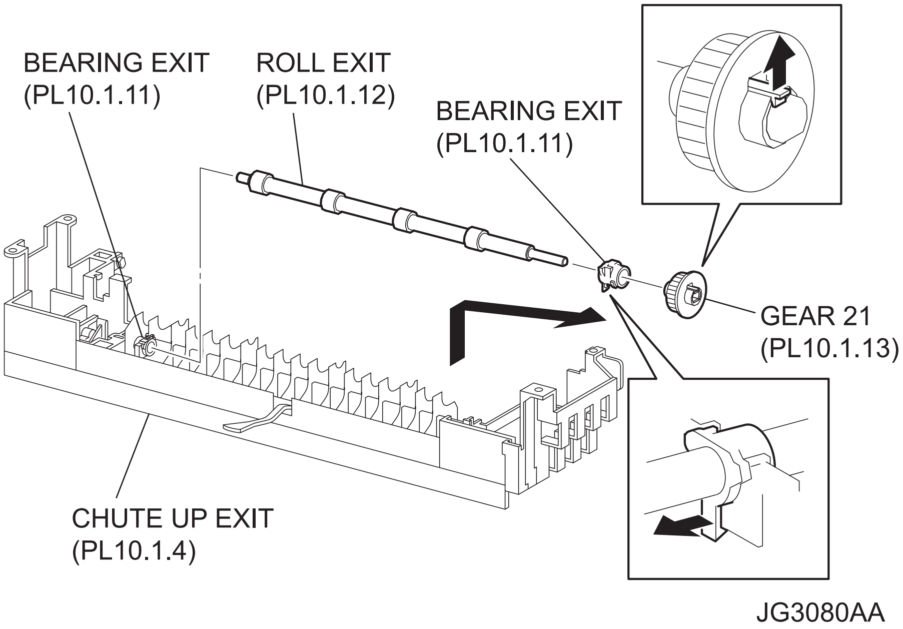
NOTE **After installing, make sure that the GATE moves when the LINK GATE OCT is pushed in the direction of the arrow. (Note2)**

5) Install the 500 EXIT ASSY (PL10.1.12). (RRP10.2)
6) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
7) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
8) Install the COVER LEFT (PL1.1.6). (RRP1.3)
9) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

10) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP10.4 ROLL EXIT (PL10.1.12)


BEARING EXIT
(PL10.1.11)
ROLL EXIT
(PL10.1.12)
BEARING EXIT
(PL10.1.11)
GEAR 21
(PL10.1.13)
CHUTE UP EXIT
(PL10.1.4)
JG3080AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the CHUTE UP EXIT (PL10.1.4). (RRP10.3)
7) Release the hook of the GEAR 21 (PL10.1.13), and remove it from the ROLL EXIT.
8) Release the hook of the BEARING EXIT (PL10.1.11) on the GEAR 21 side, and lift up the ROLL EXIT, then, remove the BEARING EXIT from the ROLL EXIT.

NOTE **Be careful handling the hook of the BEARING EXIT. It is fragile and could break if given excessive force.**

9) Remove the ROLL EXIT from the other side of the BEARING EXIT by shifting the ROLL EXIT in the direction of the arrow as shown in the figure.

NOTE **When removing, do not hold the rubber rollers of the ROLL EXIT.**

Replacement

1) Install the ROLL EXIT to the BEARING EXIT (PL10.1.11) by shifting the ROLL EXIT in the opposite direction of the arrow.

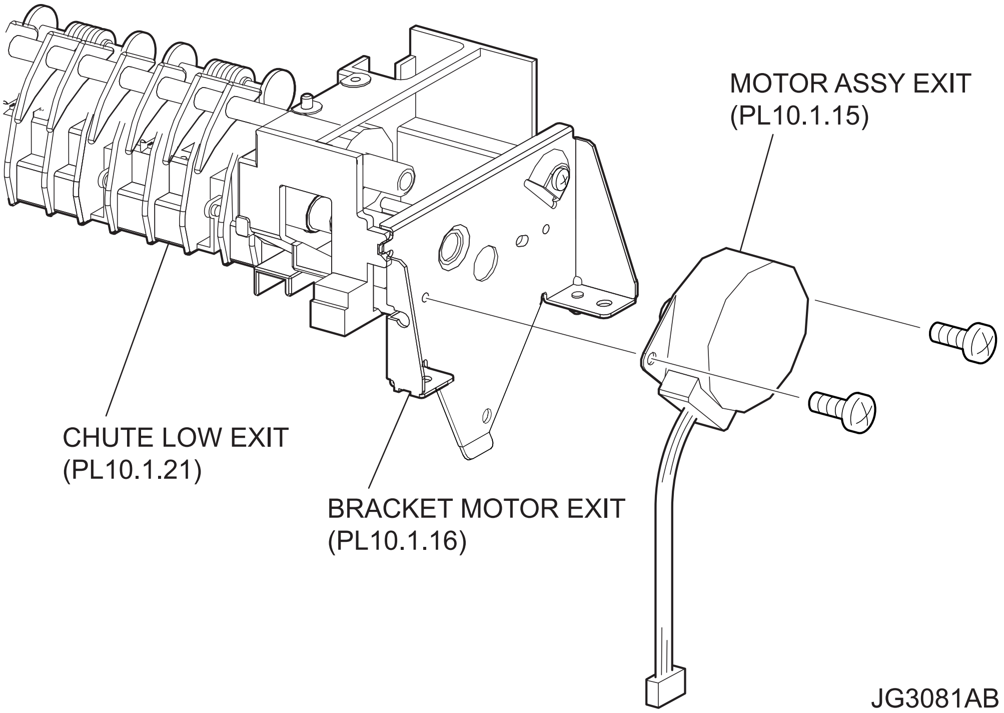
NOTE **When installing, do not hold the rubber rollers of the ROLL EXIT.**

2) Put the BEARING EXIT to the ROLL EXIT on the GEAR 21 side, and install the BEARING EXIT to the CHUTE UP EXIT (PL10.1.4), and then secure it with the hook.
3) Install the GEAR 21 (PL10.1.13) to the ROLL EXIT, and secure it with the hook.
4) Install the CHUTE UP EXIT. (RRP10.3)
5) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
7) Install the COVER LEFT (PL1.1.6). (RRP1.3)
8) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

9) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP10.5 MOTOR ASSY EXIT (PL10.1.15)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
7) Remove the CHUTE LOW EXIT (PL10.1.21). (RRP10.3)
8) Remove the 2 screws (silver, 6mm) securing the MOTOR ASSY EXIT to the BRACKET MOTOR EXIT (PL10.1.16).
9) Remove the MOTOR ASSY EXIT.

Replacement

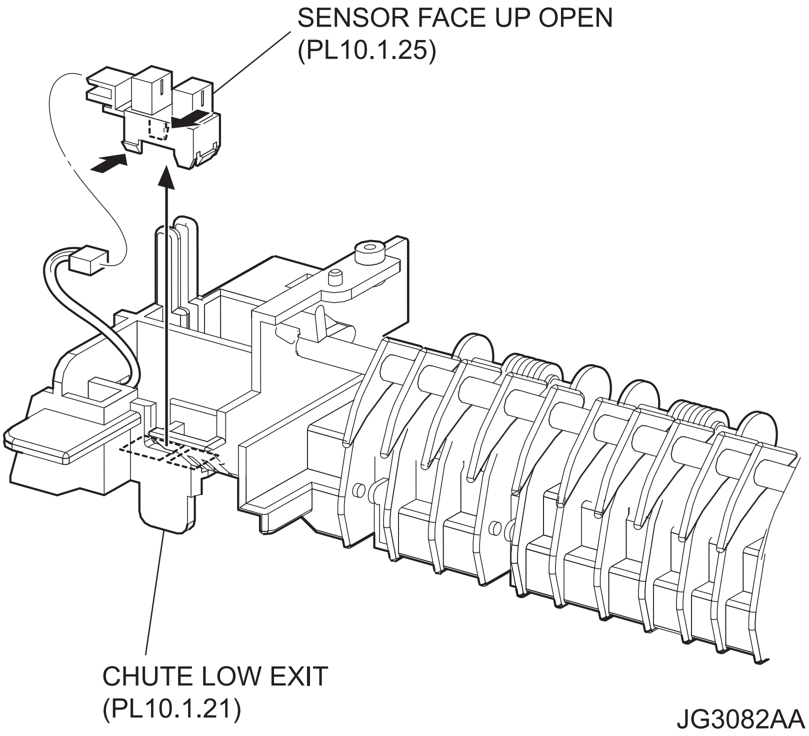
1) Secure the MOTOR ASSY EXIT to the BRACKET MOTOR EXIT (PL10.1.16) using the 2 screws (silver, 8mm).
2) Install the CHUTE LOW EXIT (PL10.1.21). (RRP10.3)
3) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
4) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
5) Install the COVER RIGHT (PL1.1.4). (RRP1.2)

6) Install the COVER LEFT (PL1.1.6). (RRP1.3)
7) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

8) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP10.6 SENSOR FACE UP OPEN (PL10.1.25)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the CHUTE UP EXIT (PL10.1.4). (RRP10.3)
7) Disconnect the connector (P/J291) of the HARNESS ASSY EXIT SNR (PL10.1.27) from the SENSOR FACE UP OPEN.
8) Lift up the CHUTE LOW EXIT (PL10.1.21), and release the hooks of the SENSOR FACE UP OPEN, then, remove the SENSOR FACE UP OPEN from the CHUTE LOW EXIT.

Replacement

1) Install the SENSOR FACE UP OPEN to the CHUTE LOW EXIT (PL10.1.21).
2) Connect the connector (P/J291) of the HARNESS ASSY EXIT SNR (PL10.1.27) to the SENSOR FACE UP OPEN.
3) Install the CHUTE UP EXIT (PL10.1.4). (RRP10.3)
4) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
5) Install the COVER RIGHT (PL1.1.4). (RRP1.2)

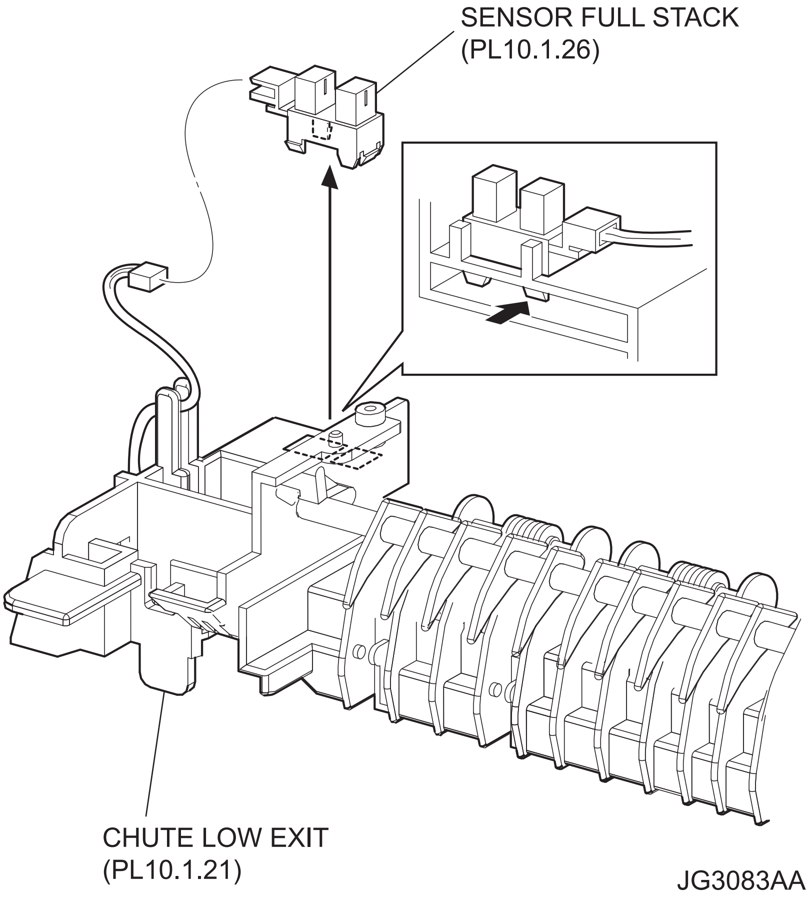
6) Install the COVER LEFT (PL1.1.6). (RRP1.3)

7) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

8) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP10.7 SENSOR FULL STACK (PL10.1.26)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the CHUTE UP EXIT (PL10.1.4). (RRP10.3)
7) Disconnect the connector (P/J290) of the HARNESS ASSY EXIT SNR (PL10.1.27) from the SENSOR FULL STACK.
8) Release the hooks of the SENSOR FULL STACK, and remove the SENSOR FULL STACK from the CHUTE LOW EXIT (PL10.1.21).

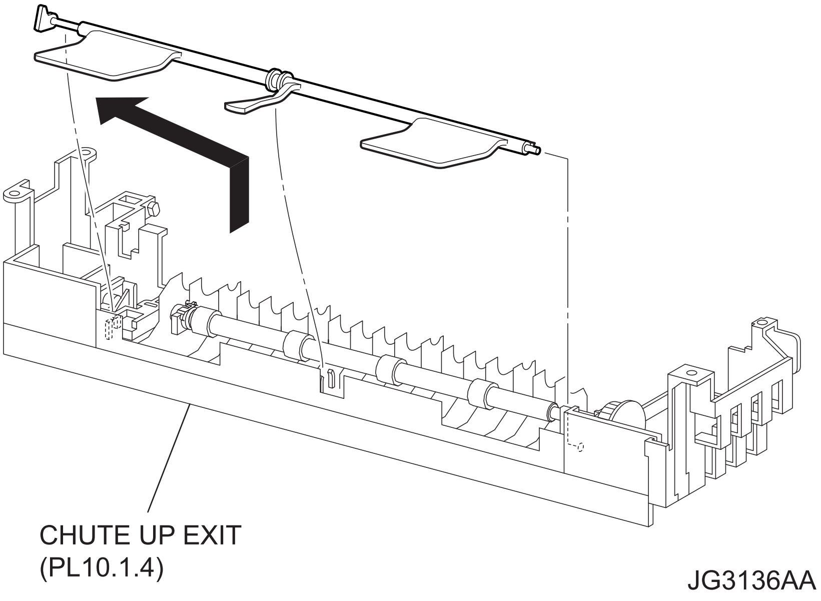
Replacement

1) Install the SENSOR FULL STACK to the CHUTE LOW EXIT (PL10.1.21).
2) Connect the connector (P/J290) of the HARNESS ASSY SNR (PL10.1.27) to the SENSOR FULL STACK.
3) Install the CHUTE UP EXIT (PL10.1.4). (RRP10.3)
4) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
5) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
6) Install the COVER LEFT (PL1.1.6). (RRP1.3)
7) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

8) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP10.8 ACTUATOR FULL STACK (PL10.1.10)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the CHUTE UP EXIT (PL10.1.4). (RRP10.3)
7) Remove the ACTUATOR FULL STACK from the CHUTE UP EXIT by moving it in the direction of the arrow.

Replacement

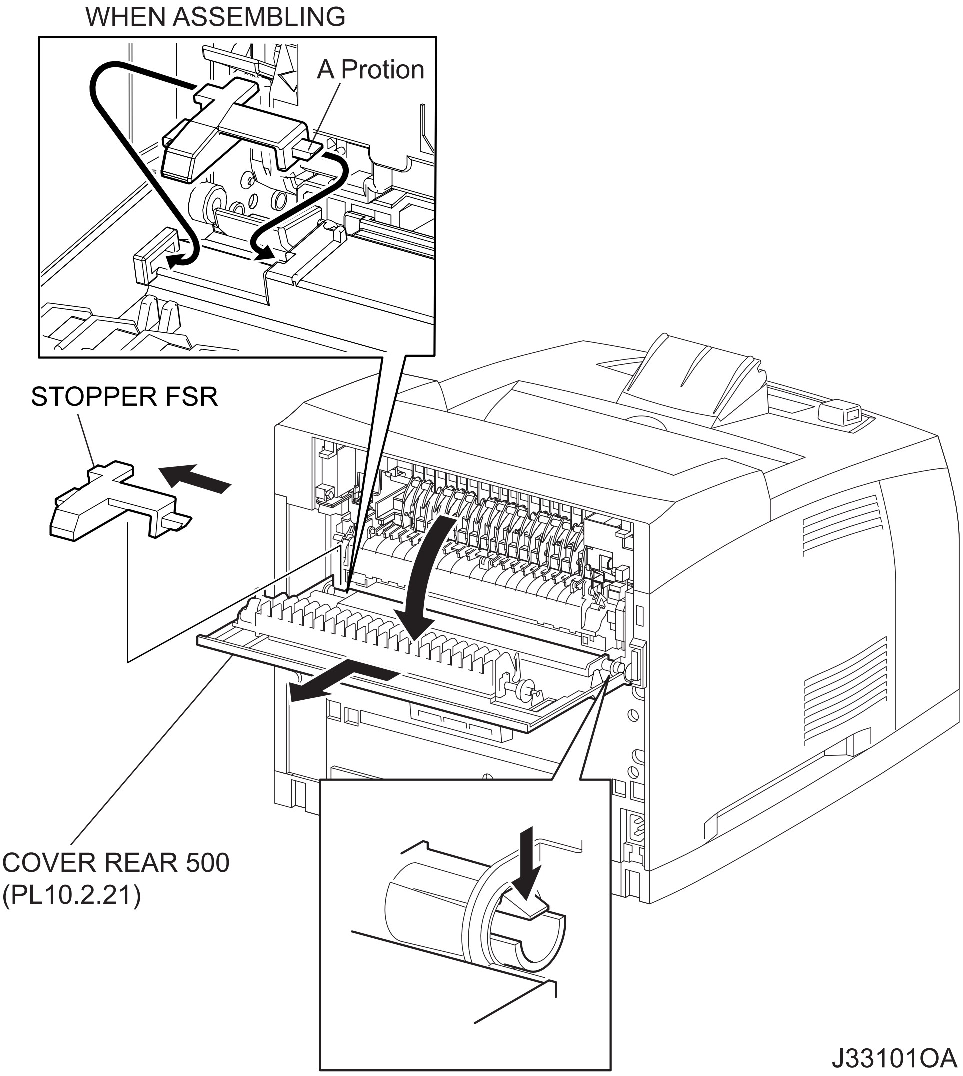
1) Install the ACTUATOR FULL STACK to the CHUTE UP EXIT (PL10.1.4) by moving it in the opposite direction of the arrow.
2) Install the CHUTE UP EXIT. (RRP10.3)
3) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
4) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Install the COVER LEFT (PL1.1.6). (RRP1.3)
6) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE

There are 2 kinds of screws, make sure they are put in the right place.

7) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP10.9 COVER REAR 500 (PL10.2.21)


WHEN ASSEMBLING
A Protion
STOPPER FSR
COVER REAR 500
(PL10.2.21)
J33101OA

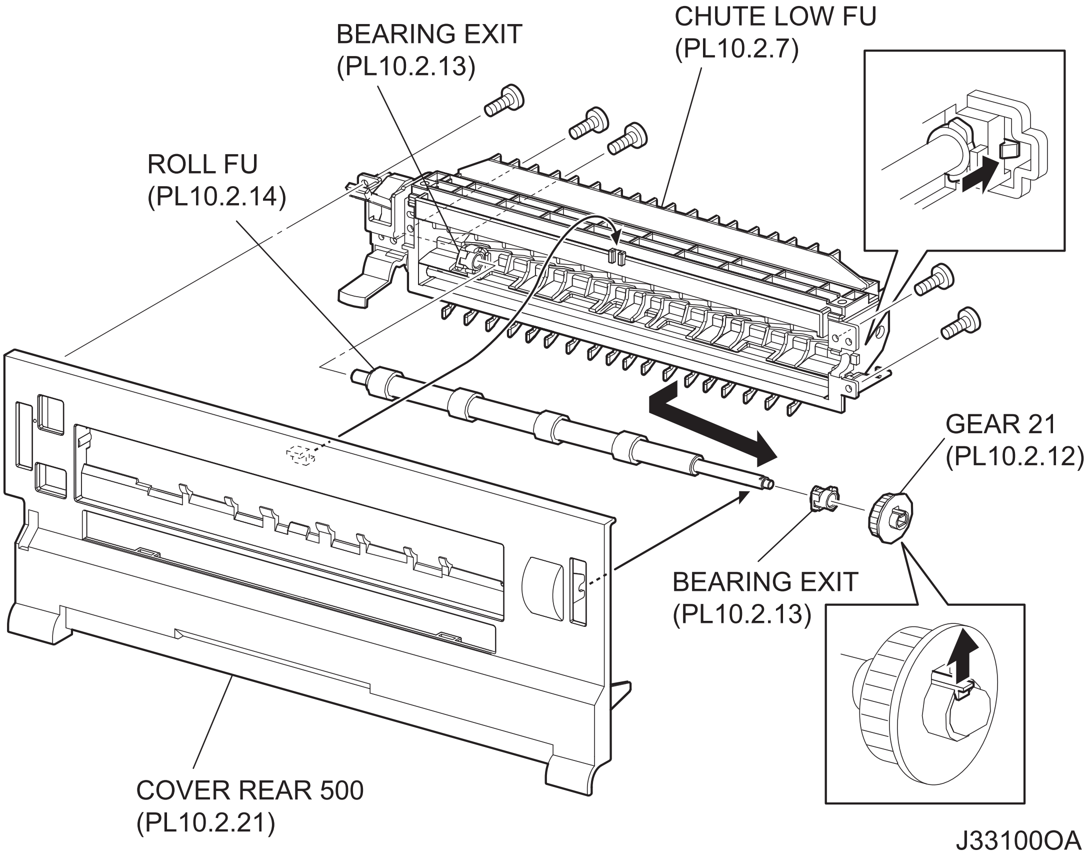
Removal

1) Pinch the lever to release the lock, and open the COVER REAR 500.
2) Move the STOPPER FSR in the arrow direction to remove.
3) Release the hook of the right side boss of the COVER REAR 500, and shift the COVER REAR 500 in the direction of the arrow to remove from the printer.

Replacement

1) Shift the COVER REAR 500 in the opposite direction of the arrow to install, and secure it with the hook.
2) Insert the A portion of the STOPPER FSR into the COVER REAR 500 first, and insert the opposite side of the A portion.
3) Close the COVER REAR 500.

RRP10.10 ROLL FU (PL10.2.14)


BEARING EXIT
(PL10.2.13)
CHUTE LOW FU
(PL10.2.7)
ROLL FU
(PL10.2.14)
GEAR 21
(PL10.2.12)
BEARING EXIT
(PL10.2.13)
COVER REAR 500
(PL10.2.21)
J33100OA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the 5 screws (gold tapping, 8mm) securing the CHUTE LOW FU (PL10.2.7) to the COVER REAR 500.
3) Release the hooks of the COVER REAR 550, and remove the CHUTE LOW FU from the COVER REAR 500.
4) Release the hook of the GAER 21 (PL10.2.12), and remove it from the ROLL FU.
5) Release the hook of the BEARING EXIT (PL10.2.13), and remove it from the CHUTE LOW FU.

NOTE **Be careful handling the hook of the BEARING EXIT. It is fragile and could break if given excessive force.**

6) Remove the ROLL FU in the direction of the arrow.

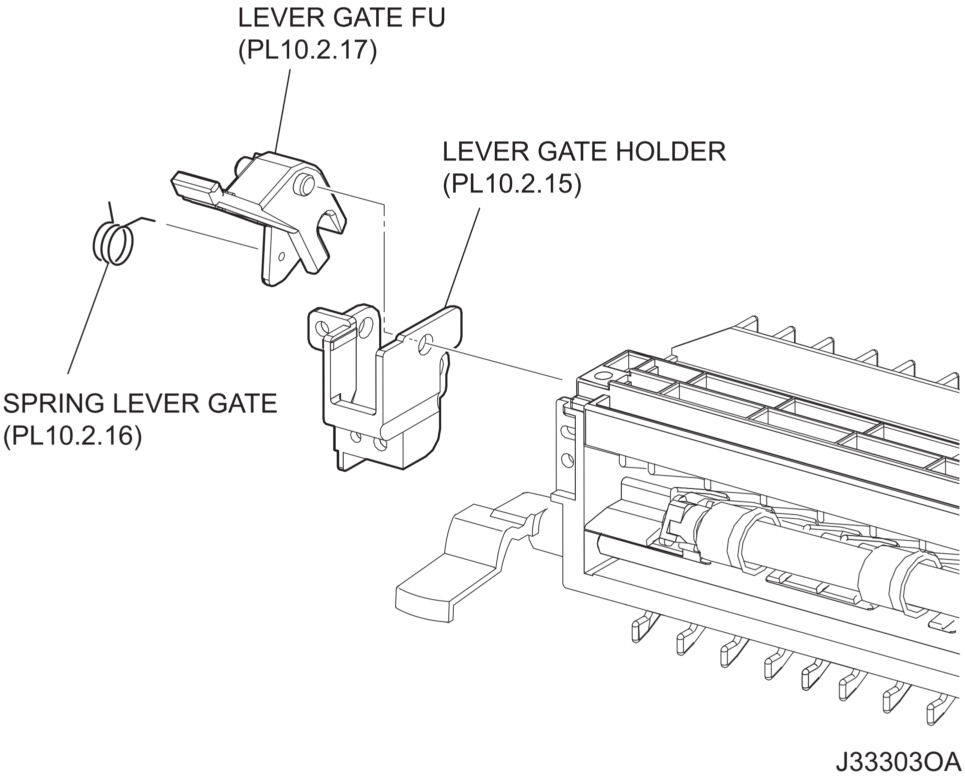
Replacement

1) Install the ROLL FU to the BEARING EXIT (PL22.1.13) on the opposite side of the GEAR 21 (PL10.2.12) by shifting the ROLL FU in the opposite direction of the arrow.
2) Install the BEARING EXIT to the CHUTE LOW FU (PL10.2.7).
3) Install the GEAR 21 to the ROLL FU, and secure it with the hook.

NOTE **Be sure to install the hook of the GEAR 21 into the groove of the ROLL FU.**

4) Install the CHUTE LOW FU to the COVER REAR 550, and secure it with the hook.
5) Secure the CHUTE LOW FU to the COVER REAR 550 using the 5 screws (gold tapping, 8mm).
6) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP10.11 SPRING LEVER GATE, LEVER GATE HOLDER and LEVER GATE FU



SPRING LEVER GATE (PL10.2.16)
LEVER GATE HOLDER (PL10.2.15)
LEVER GATE FU (PL10.2.17)

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the 5 screws (gold tapping, 6mm) securing the CHUTE LOW FU (PL10.2.7) to the COVER REAR 550.
3) Release the hooks of the COVER REAR 550, and remove the CHUTE LOW FU from the COVER REAR 550.
4) Remove the ROLL FU (PL10.2.14).(RRP10.10).
5) Remove the LEVER GATE FU (PL10.2.17) by rotating.

NOTE **LEVER GATE HOLDER (PL10.2.15), SPRING LEVER GATE (PL10.2.16), and LEVER GATE FU (PL10.2.17) are removed at the same time.**

6) Bend LEVER GATE FU (PL10.2.17), and remove it from LEVER GATE HOLDER (PL10.2.15).

NOTE **SPRING LEVER GATE (PL10.2.16) remains on the side of LEVER GATE HOLDER (PL10.2.15).**

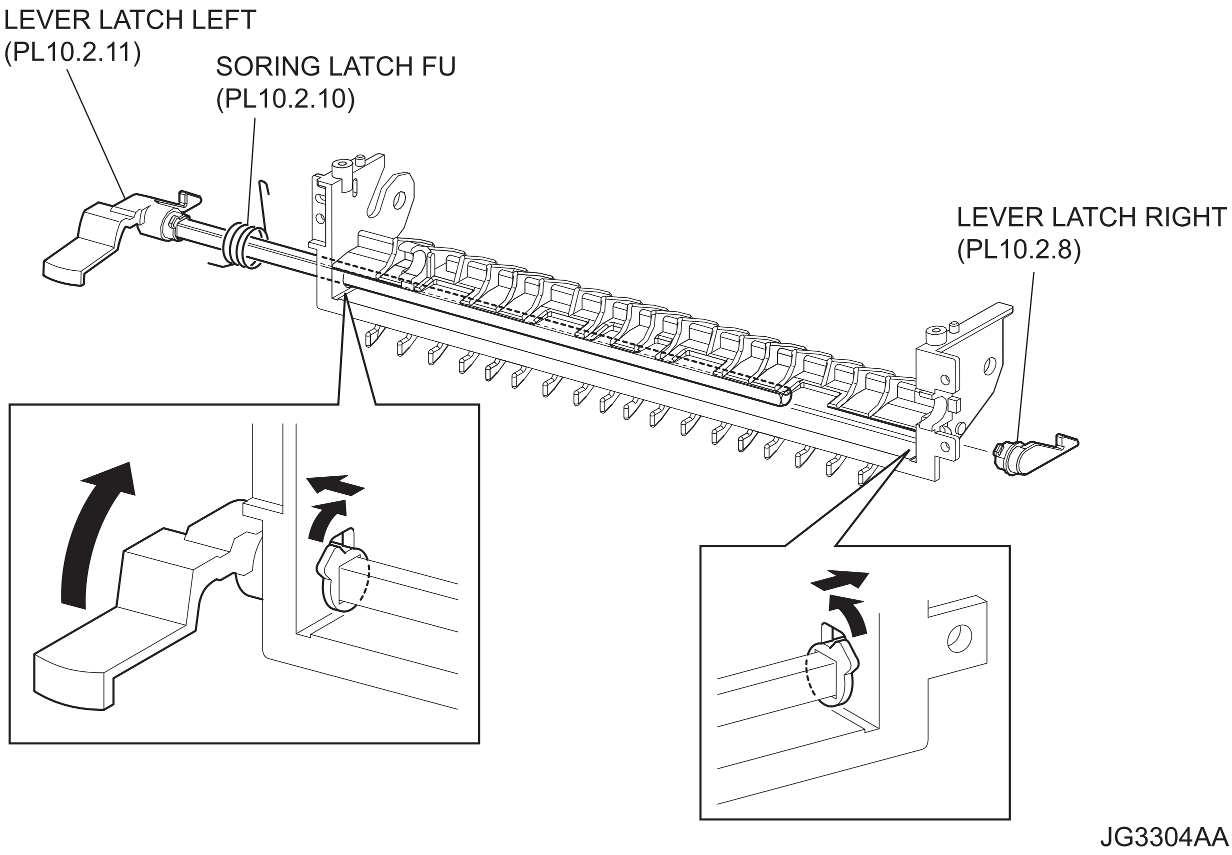
7) Remove the SPRING LEVER GATE (PL10.2.16).

Replacement

1) Install the ROLL FU to the BEARING EXIT (PL22.1.13) on the opposite side of the GEAR 21 (PL10.2.12) by shifting the ROLL FU in the opposite direction of the arrow.
2) Install the BEARING EXIT to the CHUTE LOW FU (PL10.2.7).
3) Install the GEAR 21 to the ROLL FU, and secure it with the hook.
4) Install the ROLL FU (PL10.2.14).(RRP10.10).
5) Install the CHUTE LOW FU to the COVER REAR 550, and secure it with the hook.
6) Secure the CHUTE LOW FU to the COVER REAR 550 using the 5 screws (gold tapping, 6mm).
7) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP10.12 LEVER LATCH LEFT, SPRING LATCH FU, LEVER LATCH RIGHT

LEVER LATCH LEFT (PL10.2.8),
SPRING LATCH FU (PL10.2.10),
LEVER LATCH RIGHT (PL10.2.11)


LEVER LATCH LEFT
(PL10.2.11)
SORING LATCH FU
(PL10.2.10)
LEVER LATCH RIGHT
(PL10.2.8)
JG3304AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the 5 screws (gold tapping, 6mm) securing the CHUTE LOW FU (PL10.2.7) to the COVER REAR 550.
3) Release the hooks of the COVER REAR 550, and remove the CHUTE LOW FU from the COVER REAR 550.
4) Remove the ROLL FU (PL10.2.14). (RRP10.10)
5) Remove the LEVER GATE HOLDER (PL10.2.15), SPRING LEVER GATE (PL10.2.16) and LEVER GATE FU (PL10.2.17).(RRP10.11)
6) Rotate LEVER LATCH LEFT (PL10.2.8) in the direction of the arrow, and remove it.

NOTE **Fit the position of the internal projection of LEVER LATCH LEFT (PL10.2.8) and the notch of CHUTE LOW FU (PL10.2.7) completely.**

7) Rotate LEVER LATCH RIGHT (PL10.2.11) in the direction of the arrow, and remove it.

NOTE **Fit the position of the internal projection of LEVER LATCH RIGHT (PL10.2.11) and the notch of CHUTE LOW FU (PL10.2.7) completely.**

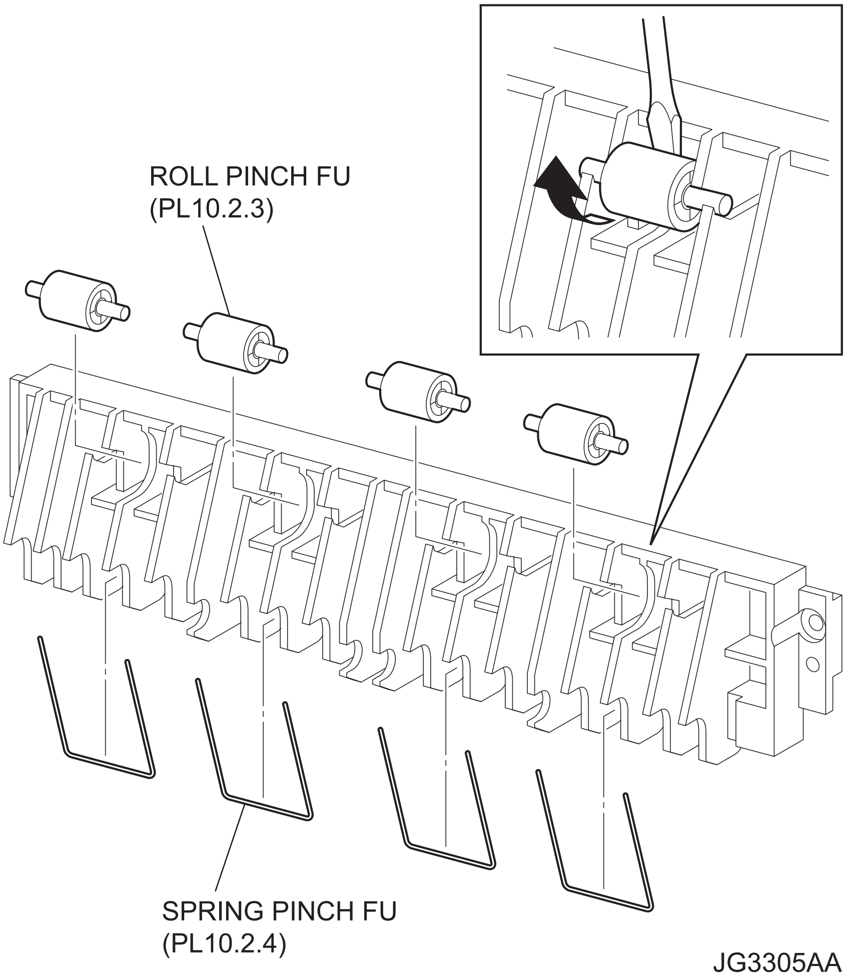
NOTE **PIPE LATCH FU (PL10.2.9) is also removed.**

8) Remove the SPRING LATCH (PL10.2.10).

Replacement

1) Install the SPRING LATCH (PL10.2.10).
2) Install the LEVER LATCH LEFT (PL10.2.8) to PIPE LATCH FU (PL10.2.9), then install them to CHUTE LOW FU (PL10.2.7).
3) Install the LEVER LATCH RIGHT (PL10.2.11) to PIPE LATCH FU (PL10.2.9).
4) Fit the projections of both LEVER LATCH RIGHT (PL10.2.11) and LEVER LATCH LEFT (PL10.2.8) to the notch of CHUTE LOW FU (PL10.2.7), and install by rotating in the opposite direction of the arrow.
5) Install the LEVER GATE HOLDER (PL10.2.15), SPRING LEVER GATE (PL10.2.16) and LEVER GATE FU (PL10.2.17).(RRP10.11)
6) Install the ROLL FU (PL10.2.14).(RRP10.10).
7) Install the CHUTE LOW FU to the COVER REAR 550, and secure it with the hook.
8) Secure the CHUTE LOW FU to the COVER REAR 550 using the 5 screws (gold tapping, 6mm).
9) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP10.13 ROLL PINCH FU (PL10.2.3), SPRING PINCH FU (PL10.2.4)



Removal

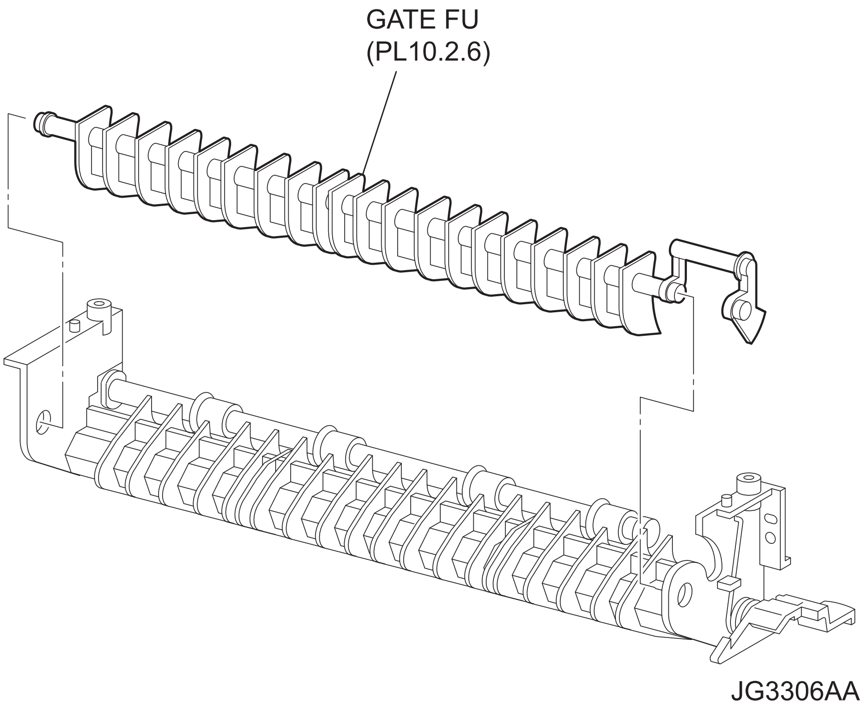
1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the 5 screws (gold tapping, 6mm) securing the CHUTE LOW FU (PL10.2.7) to the COVER REAR 550.
3) Release the hooks of the COVER REAR 550, and remove the CHUTE LOW FU from the COVER REAR 550.
4) Remove the 2 screws (gold tapping, 6mm) securing the CHUTE UP FU (PL10.2.2).
5) Insert a screwdriver between ROLL PINCH FU (PL10.2.3) and CHUTE UP FU (PL10.2.2), and remove ROLL PINCH FU (PL10.2.3).
6) Remove the SPRING PINCH FU (PL10.2.4).

Replacement

1) Install the SPRING PINCH FU (PL10.2.4).

2) Install the ROLL PINCH FU (PL10.2.3).
3) Install the CHUTE UP FU (PL10.2.2) to the CHUTE LOW FU(PL10.2.7) using the 4 screws (gold tapping, 6mm).
4) Install the CHUTE LOW FU to the COVER REAR 550, and secure it with the hook.
5) Secure the CHUTE LOW FU to the COVER REAR 550 using the 5 screws (gold tapping, 6mm).
6) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP10.14 GATE FU (PL10.2.6)



Removal

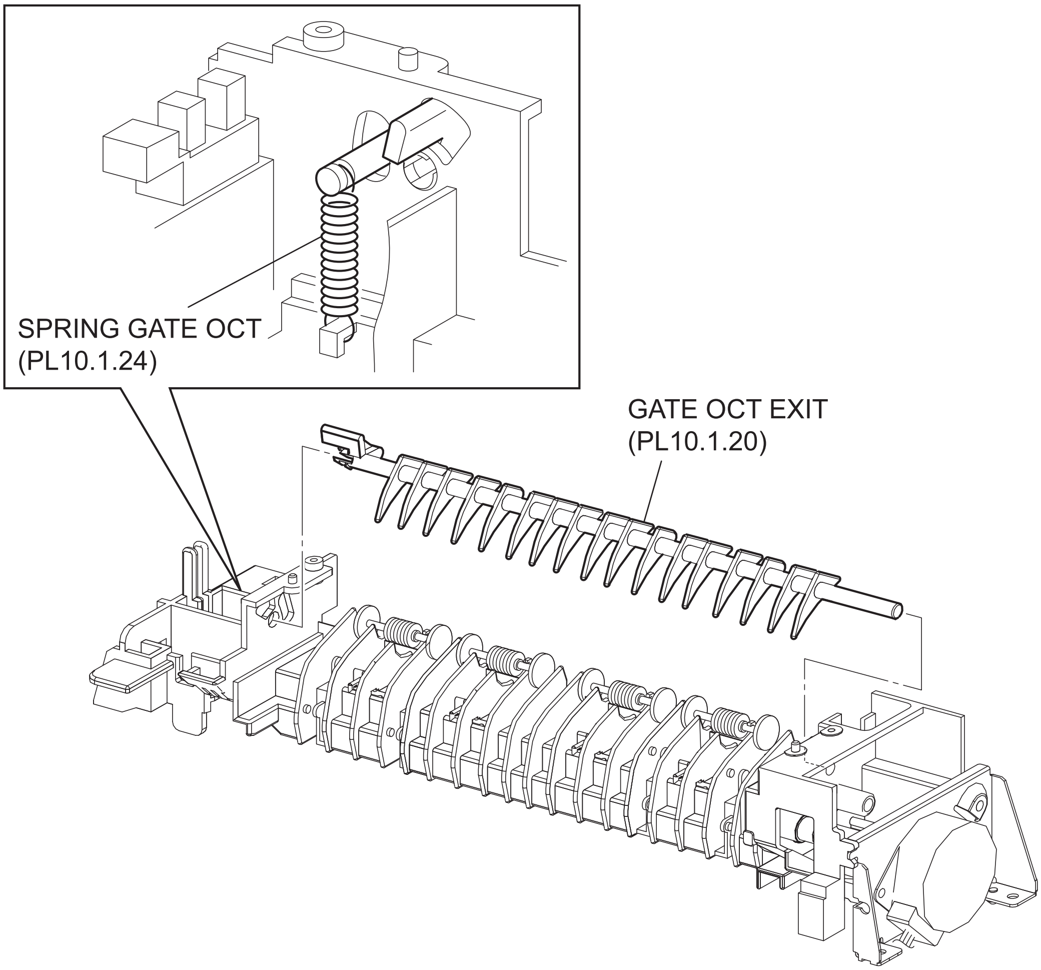
1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the 5 screws (gold tapping, 6mm) securing the CHUTE LOW FU (PL10.2.7) to the COVER REAR 550.
3) Release the hooks of the COVER REAR 550, and remove the CHUTE LOW FU from the COVER REAR 550.
4) Remove the LEVER GATE HOLDER (PL10.2.15), SPRING LEVER GATE (PL10.2.16) and LEVER GATE FU (PL10.2.17).(RRP10.11)
5) Remove the 2 screws (gold tapping,6mm) securing the CHUTE UP FU (PL10.2.2).
6) Remove the GATE FU (PL10.2.6) from CHUTE LOW FU (PL10.2.7) by bending GATE FU (PL10.2.6).

NOTE **Be careful handling the GATE FU. It is fragile and could break if given excessive force.**

Replacement

1) Install the GATE FU (PL10.2.6) to CHUTE LOW FU (PL10.2.7).
2) Secure the CHUTE UP FU using the 5 screws (gold tapping, 6mm).
3) Install the LEVER GATE HOLDER (PL10.2.15), SPRING LEVER GATE (PL10.2.16) and LEVER GATE FU (PL10.2.17).(RRP10.11)
4) Install the ROLL FU to the BEARING EXIT (PL22.1.13) on the opposite side of the GEAR 21 (PL10.2.12) by shifting the ROLL FU in the opposite direction of the arrow.
5) Install the CHUTE LOW FU to the COVER REAR 550, and secure it with the hook.
6) Secure the CHUTE LOW FU to the COVER REAR 550 using the 5 screws (gold tapping, 6mm).
7) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP10.15 GATE OCT EXIT (PL10.1.20)



JG3307AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
7) Remove the CHUTE LOW EXIT (PL10.1.21). (RRP10.3)
8) Remove the SPRING GATE OCT (PL10.1.24).
9) Bend GATE OCT EXIT (PL10.1.20), and remove the it from CHUTE LOW EXIT.

Replacement

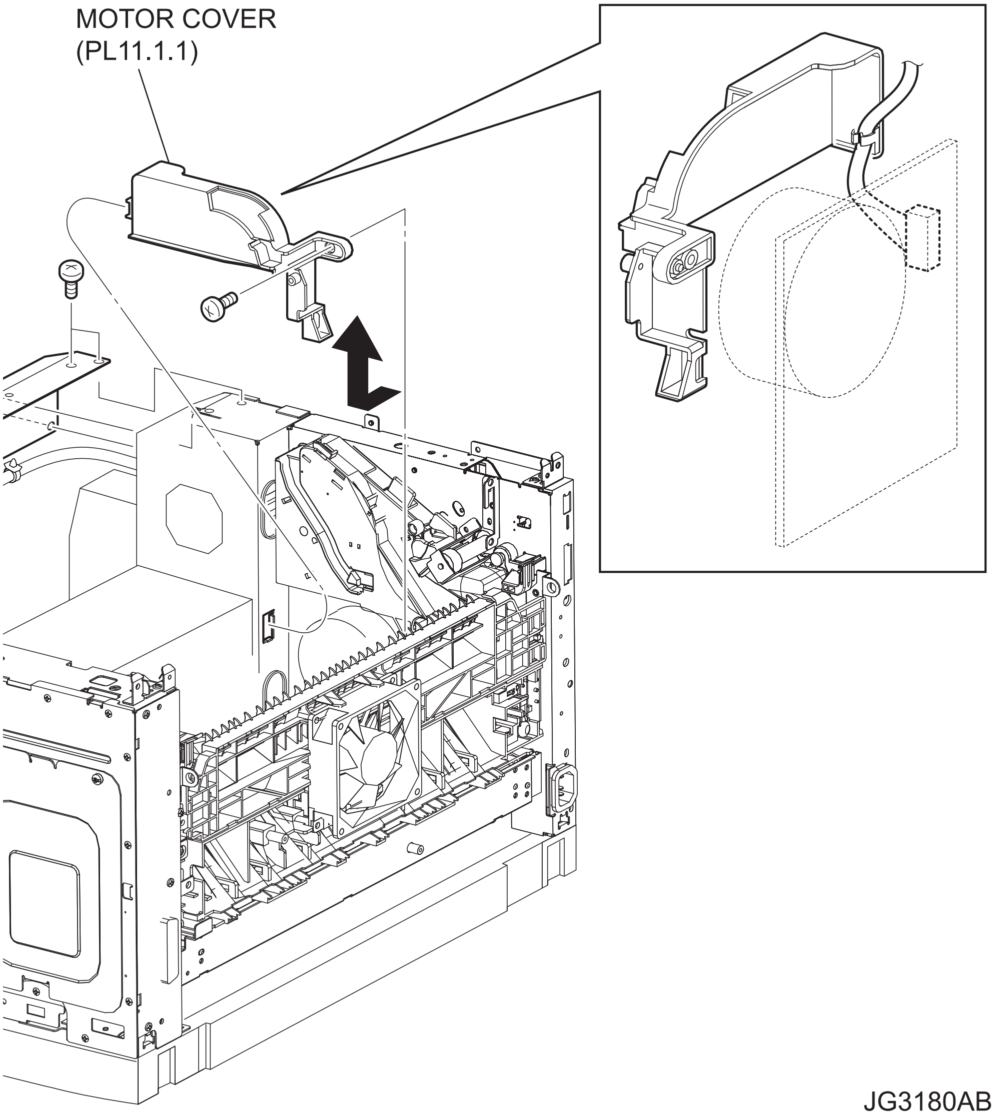
1) Install the GATE OCT EXIT (PL10.1.20).
2) Install the SPRING GATE OCT (PL10.1.24).
3) Install the CHUTE LOW EXIT (PL10.1.21). (RRP10.3)
4) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
5) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
7) Install the COVER LEFT (PL1.1.6). (RRP1.3)
8) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

9) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP11. Frame & Drive

RRP11.1 MOTOR COVER (PL11.1.1)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Remove the COVER LEFT (PL1.1.6). (RRP1.3)

5) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
6) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
7) Remove the 500 EXIT ASST (PL10.1.2). (RRP10.2)
8) Remove the COVER TOP (PL1.1.7). (RRP1.4)
9) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
10) Remove the BTR ASSY (PL8.1.21). (RRP8.10)
11) Remove the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
12) Remove the DUCT FRONT (PL8.1.4). (RRP8.2)
13) Remove the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

14) Remove the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
15) While lifting up the 150 FEEDER ASSY, remove the screw (silver, 6mm) securing the MOTOR COVER to the frame.
16) Remove the harness connector of MAIN MOTOR.
17) Remove the MOTOR COVER.

Replacement

1) Install the MOTOR COVER to the frame using the screw (silver, 6mm).
2) Install the harness connector of MAIN MOTOR.
3) Install the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
4) Install the ROS ASSY (PL8.1.1). (RRP8.1)

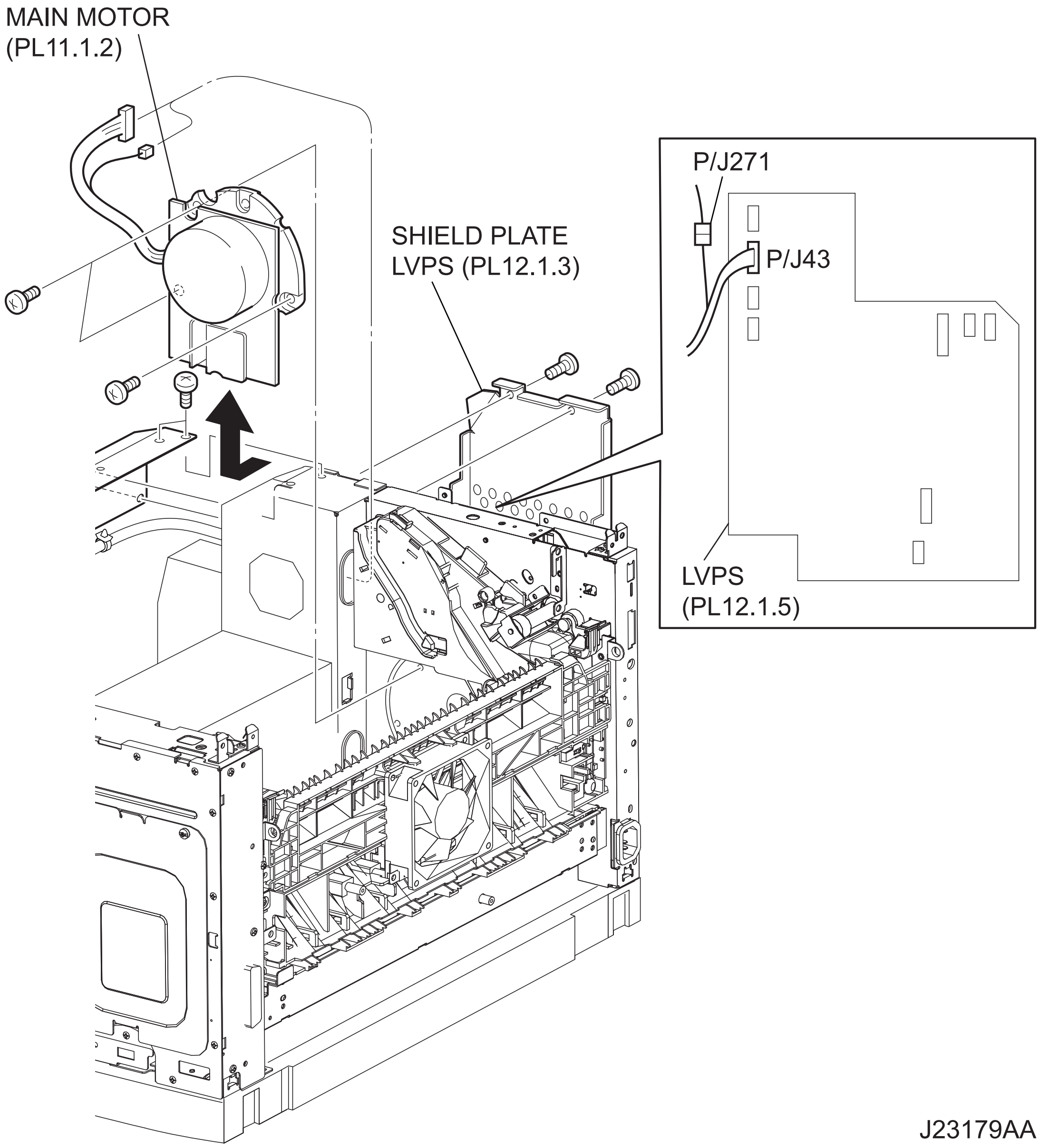
NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

5) Install the DUCT FRONT (PL8.1.4). (RRP8.2)
6) Install the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
7) Install the COVER FRONT (PL1.1.5). (RRP1.5)
8) Install the COVER TOP (PL1.1.7). (RRP1.4)
9) Install the 500 EXIT ASST (PL10.1.2). (RRP10.2)
10) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
11) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
12) Install the COVER LEFT (PL1.1.6). (RRP1.3)
13) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
14) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

15) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)
16) Install the BTR ASSY (PL8.1.21). (RRP8.10)

RRP11.2 MAIN MOTOR (PL11.1.2) (47/42ppm)


MAIN MOTOR
(PL11.1.2)
SHIELD PLATE
LVPS (PL12.1.3)
P/J271
P/J43
LVPS
(PL12.1.5)
J23179AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Remove the COVER LEFT (PL1.1.6). (RRP1.3)

5) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
6) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
7) Remove the 500 EXIT ASST (PL10.1.2). (RRP10.2)
8) Remove the COVER TOP (PL1.1.7). (RRP1.4)
9) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
10) Remove the BTR ASSY (PL8.1.21). (RRP8.10)
11) Remove the DUCT FRONT (PL8.1.4). (RRP8.2)
12) Remove the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

13) Remove the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
14) Remove the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
15) Remove the MOTOR COVER (PL11.1.1). (RRP11.1)
16) Remove the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
17) Disconnect the connector (P/J43) of the MAIN MOTOR from the LVPS (PL12.1.5) and disconnect the connector (P/J271).
18) Lift up the 150 FEEDER ASSY (PL6.1.12).

NOTE **Although the 150 FEEDER ASSY clicks into midway when lifted up, push it a little bit further.**

19) Remove the 3 screws (gold, 6mm) securing the MAIN MOTOR to the frame.
20) Remove the MAIN MOTOR.

Replacement

1) Install the MAIN MOTOR to the frame using the 3 screws (gold, 6mm).
2) Connect the connector (P/J43) of the MAIN MOTOR to the LVPS (PL12.1.5) and connect the connector (P/J271).
3) Install the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
4) Install the MOTOR COVER (PL11.1.1). (RRP11.1)
5) Install the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
6) Install the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
7) Install the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

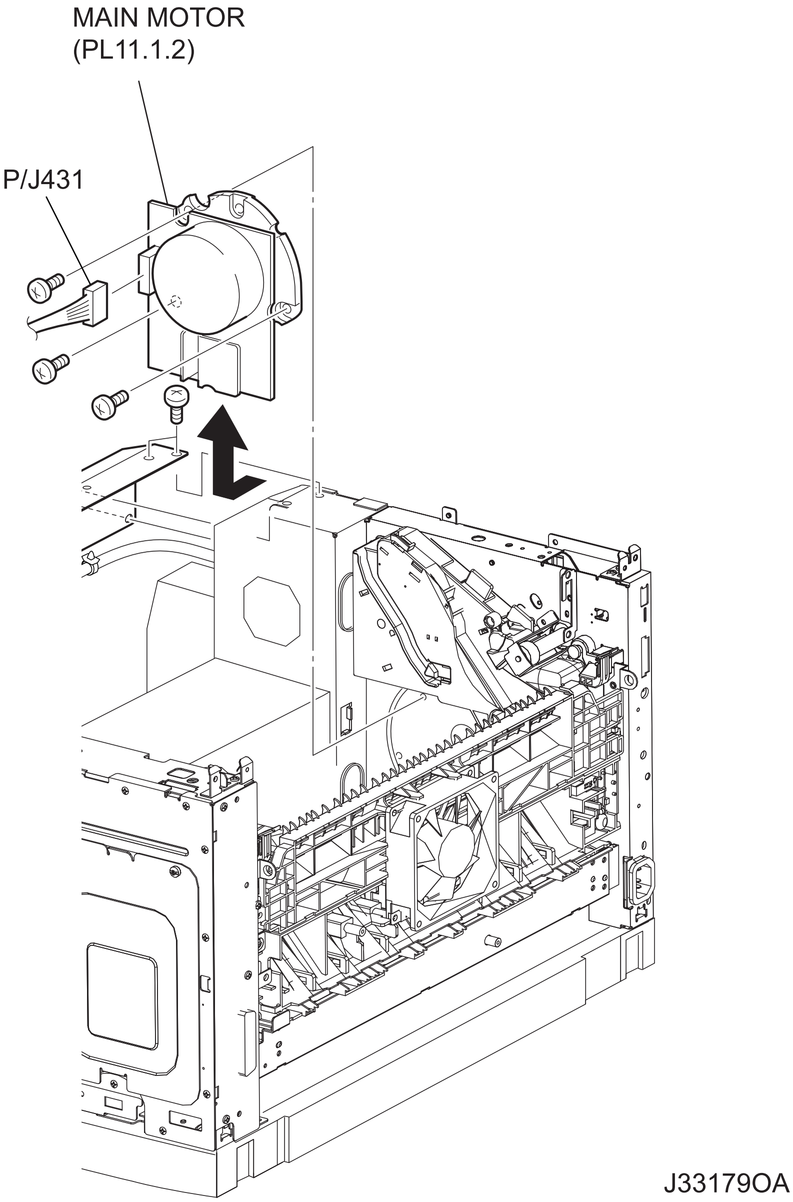
8) Install the DUCT FRONT (PL8.1.4). (RRP8.2)
9) Install the COVER FRONT (PL1.1.5). (RRP1.5)
10) Install the COVER TOP (PL1.1.7). (RRP1.4)
11) Install the500 EXIT ASST (PL10.1.2). (RRP10.2)
12) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)

13) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
14) Install the COVER LEFT (PL1.1.6). (RRP1.3)
15) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
16) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

17) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)
18) Install the BTR ASSY (PL8.1.21). (RRP8.10)

RRP11.2 MAIN MOTOR (PL11.1.2) (52ppm)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)

4) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
5) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
6) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
7) Remove the 500 EXIT ASST (PL10.1.2). (RRP10.2)
8) Remove the COVER TOP (PL1.1.7). (RRP1.4)
9) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
10) Remove the BTR ASSY (PL8.1.21). (RRP8.10)
11) Remove the DUCT FRONT (PL8.1.4). (RRP8.2)
12) Remove the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

13) Remove the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
14) Remove the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
15) Remove the MOTOR COVER (PL11.1.1). (RRP11.1)
16) Disconnect the connector (P/J431) of the MAIN MOTOR.
17) Lift up the 150 FEEDER ASSY (PL6.1.12).

NOTE **Although the 150 FEEDER ASSY clicks into midway when lifted up, push it a little bit further.**

18) Remove the 3 screws (gold, 6mm) securing the MAIN MOTOR to the frame.
19) Remove the MAIN MOTOR.

Replacement

1) Install the MAIN MOTOR to the frame using the 3 screws (gold, 6mm).
2) Connect the connector (P/J431) of the MAIN MOTOR.
3) Install the MOTOR COVER (PL11.1.1). (RRP11.1)
4) Install the GUIDE TRAY LEFT (PL7.1.7). (RRP7.8)
5) Install the SHIELD PLATE ROS (PL8.1.3). (RRP8.3)
6) Install the ROS ASSY (PL8.1.1). (RRP8.1)

NOTE **Never give any impact to the ROS ASSY with a screwdriver or other tools.**

7) Install the DUCT FRONT (PL8.1.4). (RRP8.2)
8) Install the COVER FRONT (PL1.1.5). (RRP1.5)
9) Install the COVER TOP (PL1.1.7). (RRP1.4)
10) Install the500 EXIT ASST (PL10.1.2). (RRP10.2)
11) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
12) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
13) Install the COVER LEFT (PL1.1.6). (RRP1.3)
14) Install the FUSER ASSY (PL8.1.20). (RRP8.8)

15) Install the COVER REAR (PL1.1.3). (RRP1.1)

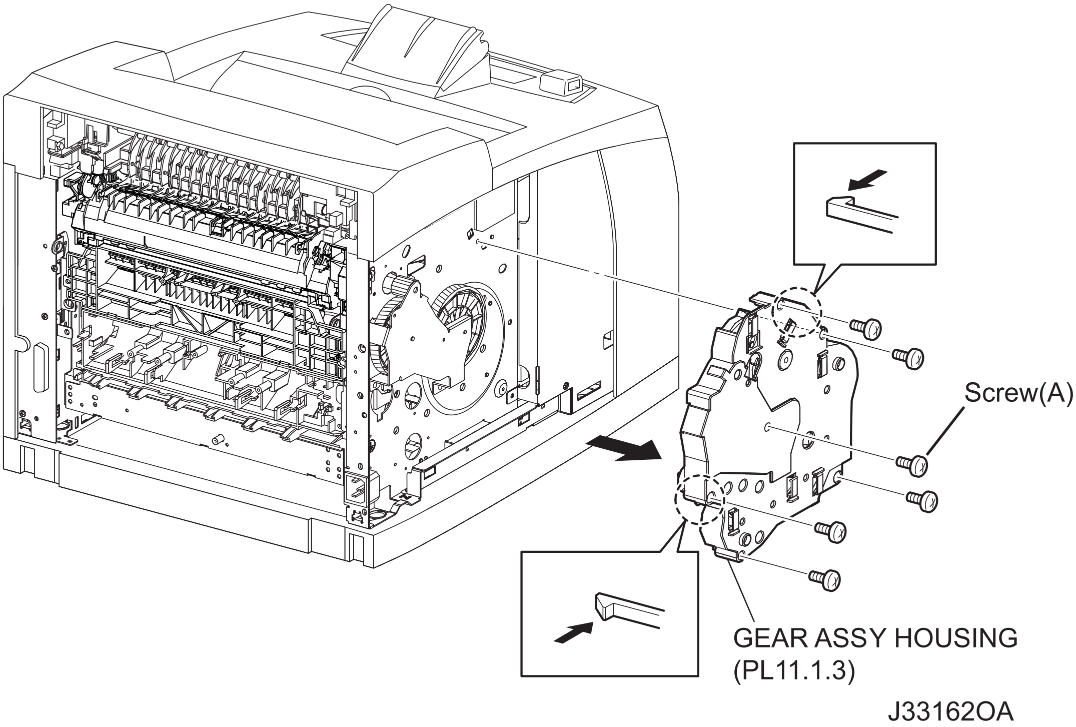
NOTE

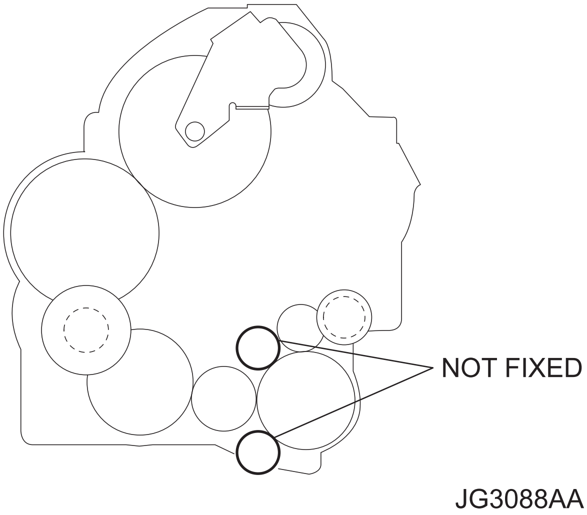
There are 2 kinds of screws, make sure they are put in the right place.

16) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

17) Install the BTR ASSY (PL8.1.21). (RRP8.10)

RRP11.3 GEAR ASSY HOUSING (PL11.1.3)


Screw(A)
GEAR ASSY HOUSING
(PL11.1.3)
J33162OA


NOT FIXED
JG3088AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Release the holding of the HARNESS ASSY INTERLOCK2 and HARNESS ASSY LVPS from the clamps on the GEAR ASSY HOUSING.
5) Remove the 6 screws (silver, 6mm x 5, gold, 6mm x 1) securing the GEAR ASSY HOUSING to the frame.
6) Release the hooks of the GEAR ASSY HOUSING, and remove it from the frame.

NOTE

When removing the GEAR ASSY HOUSING, two of the gears that are installed to the GEAR ASSY HOUSING are not fixed and they may come off. Be careful not to drop them.

Replacement

1) Install the GEAR ASSY HOUSING to the frame.

NOTE

When installing, two of the gears that are installed to the GEAR ASSY HOUSING are not fixed and they may come off. Be careful not to drop them.

NOTE

When installing, engage the gears of the GEAR ASSY HOUSING, MAIN MOTOR, and GEAR ASSY PLATE. After assembling, check the engagement of the gears. The gears will engage easily when they are assembled, by rotating the MAIN MOTOR with hand.

2) Install the GEAR ASSY HOUSING to the frame using the 6 screws (silver, 6mm x 5, gold, 6mm x 1).

NOTE

Be sure to tighten the screw (gold, 8mm) shown as “Screw (A)” in the figure.

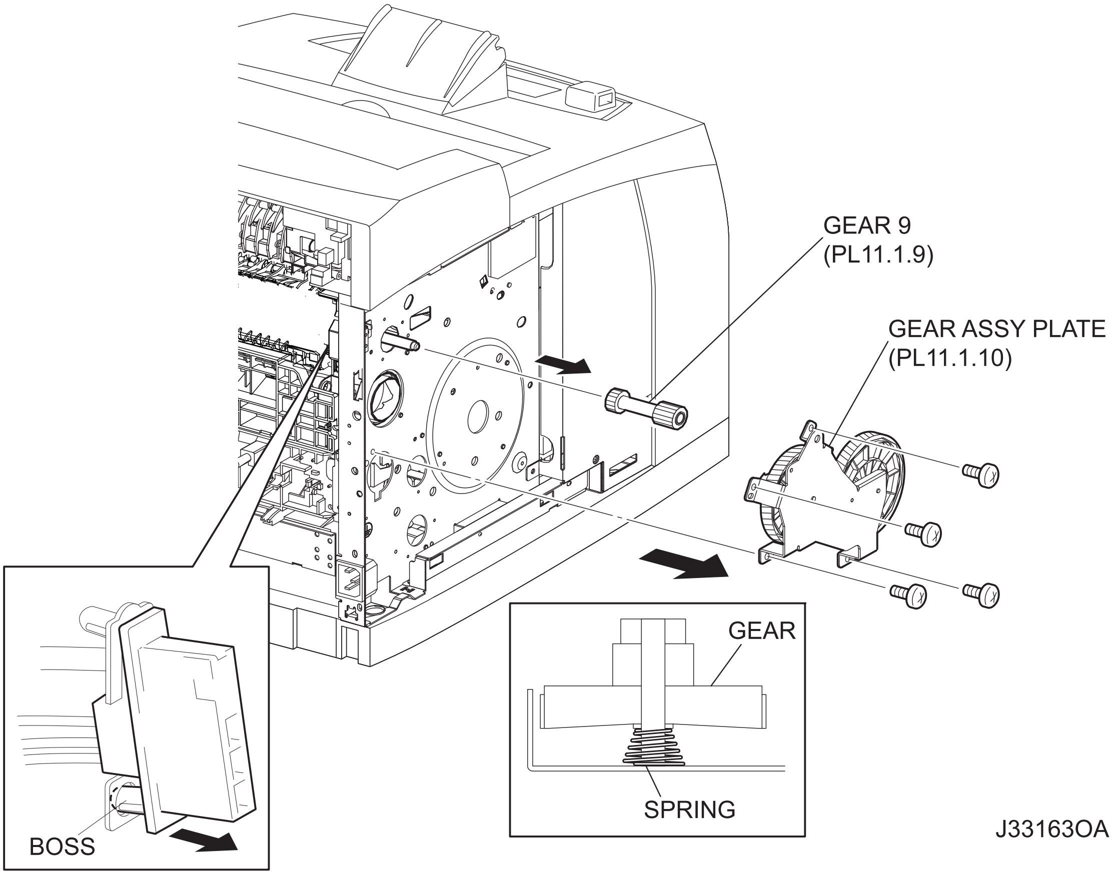
3) Secure the HARNESS ASSY INTERLOCK2 and HARNESS ASSY LVPS (PL12.1.1) using the clamps on the GEAR ASSY HOUSING.
4) Install the COVER LEFT (PL1.1.6). (RRP1.3)
5) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE

There are 2 kinds of screws, make sure they are put in the right place.

6) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP11.4 GEAR ASSY PLATE (PL11.1.10), GEAR 9 (PL11.1.9)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the FUSER ASSY (PL8.1.20). (RRP8.8)
4) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
5) Remove the GEAR ASSY HOUSING (PL11.1.3). (RRP11.3)
6) Remove the 4 screws (silver, 6mm) securing the GEAR ASSY PLATE to the frame.
7) Remove the GEAR ASSY PLATE.
8) Remove the boss of the bottom side of the connector of the HARNESS ASSY FUSER from the frame.
9) Remove the GEAR 9 (PL11.1.9) from the shaft on the frame.

NOTE **When removing the GEAR ASSY PLATE, one of the gears that are installed to the GEAR ASSY PLATE is not fixed and it may come off. Be careful not to drop it.**

NOTE **There is a SPRING inside of the GEAR that is not fixed to the GEAR ASSY PLATE. Be careful not to drop this SPRING.**

Replacement

1) Install the GEAR 9 (PL11.1.9) to the shaft on the frame.

NOTE **When installing the GEAR 9, be sure to install the narrow end of the GEAR inside.**

2) Install the boss which is under the connector of HARNESS ASSY FUSER to the frame.
3) Install the GEAR ASST PLATE to the frame using the 4 screws (silver, 6mm).

NOTE **When installing, if the GEAR or the SPRING that are not fixed to the GEAR ASSY PLATE come off, re-install them in the direction shown in the figure.**

4) Install the GEAR ASSY HOUSING (PL11.1.3). (RRP11.3)

NOTE **When installing, two of the gears that are installed to the GEAR ASSY HOUSING are not fixed and they may come off. Be careful not to drop them.**

NOTE **When installing, engage the gears of the GEAR ASSY HOUSING, MAIN MOTOR, and GEAR ASSY PLATE. After assembling, check the engagement of the gears. The gears will engage easily when they are assembled, by rotating the MAIN MOTOR with hand.**

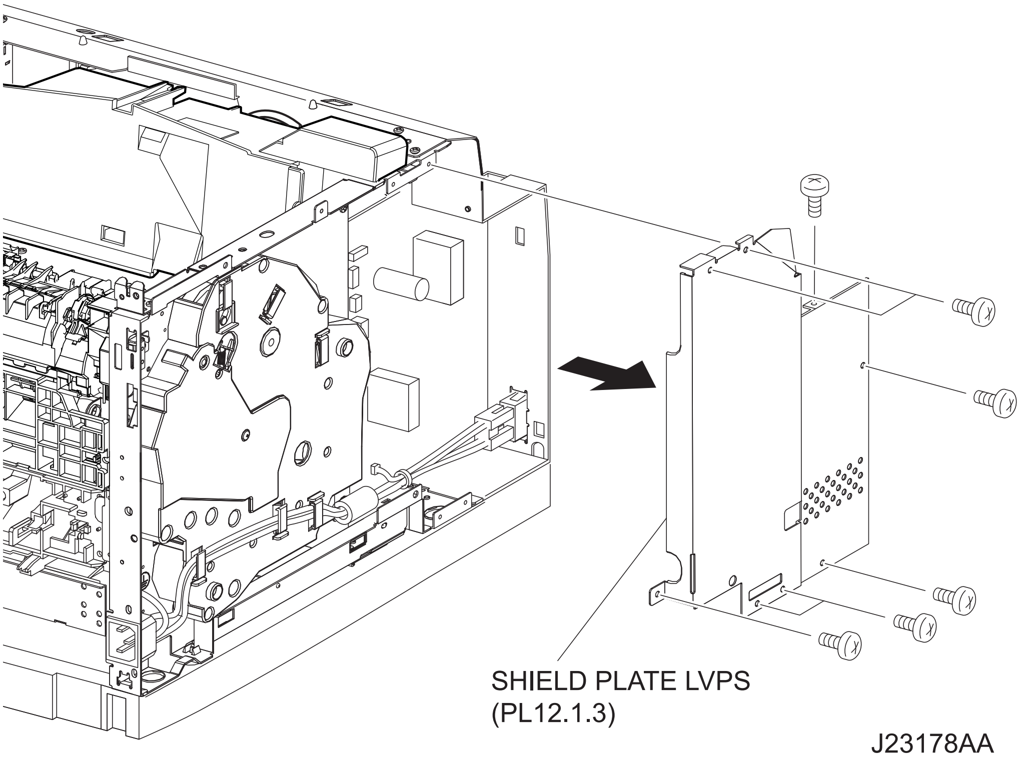
5) Insert the boss of the bottom side of the connector of the HARNESS ASSY FUSER to the frame.
6) Install the COVER LEFT (PL1.1.6). (RRP1.3)
7) Install the FUSER ASSY (PL8.1.20). (RRP8.8)
8) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

9) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP12. Electrical

RRP12.1 SHIELD PLATE LVPS (PL12.1.3)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
7) Remove the COVER TOP (PL1.1.7). (RRP1.4)
8) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
9) Remove the 8 screws (silver, 6mm) securing the SHIELD PLATE LVPS to the frame.
10) Remove the SHIELD PLATE LVPS.

Replacement

1) Install the SHIELD PLATE LVPS to the frame using the 8 screws (silver, 6mm).
2) Install the COVER FRONT (PL1.1.5). (RRP1.5)
3) Install the COVER TOP (PL1.1.7). (RRP1.4)
4) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)

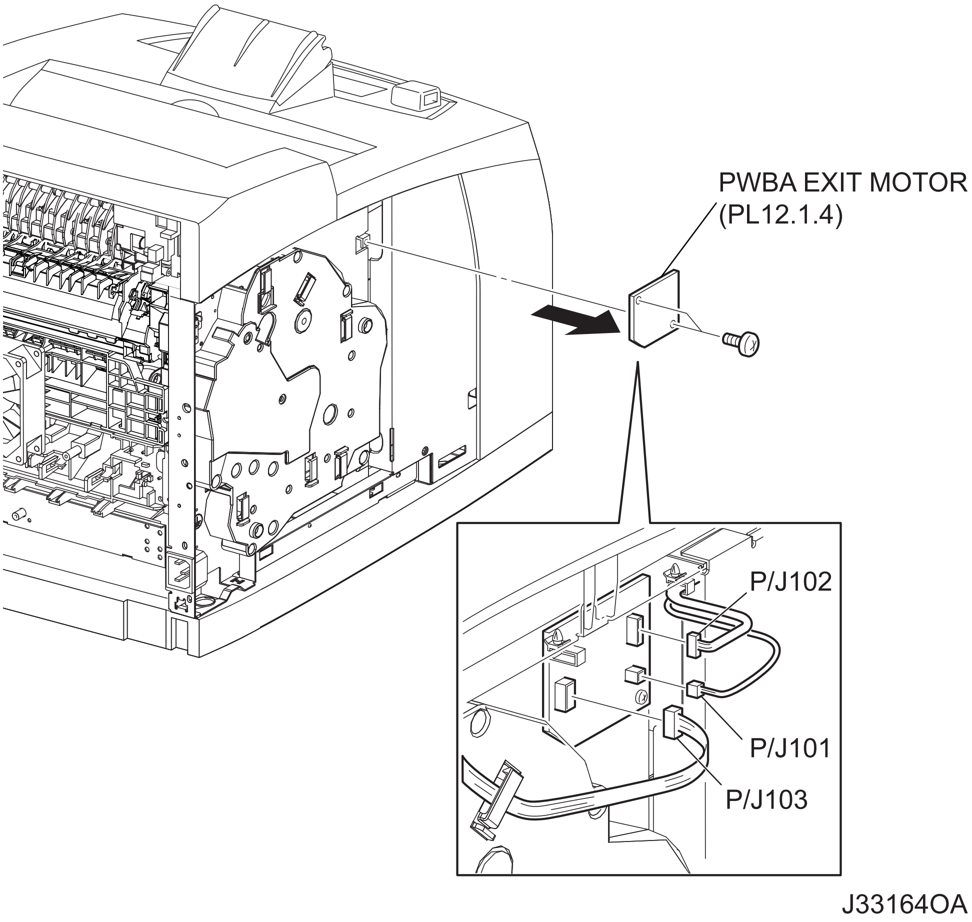
NOTE **When installing, pull the CHUTE EXIT FUSER lever.**

5) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
7) Install the COVER LEFT (PL1.1.6). (RRP1.3)
8) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

9) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP12.2 PWBA EXIT MOTOR (PL12.1.4)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Disconnect the harnesses from the connectors (P/J101, P/J102 and P/J103) on the PWBA EXIT MOTOR.
5) Remove the 2 screws (silver, 6mm) securing the PWBA EXIT MOTOR to the frame.
6) Remove the PWBA EXIT MOTOR.

Replacement

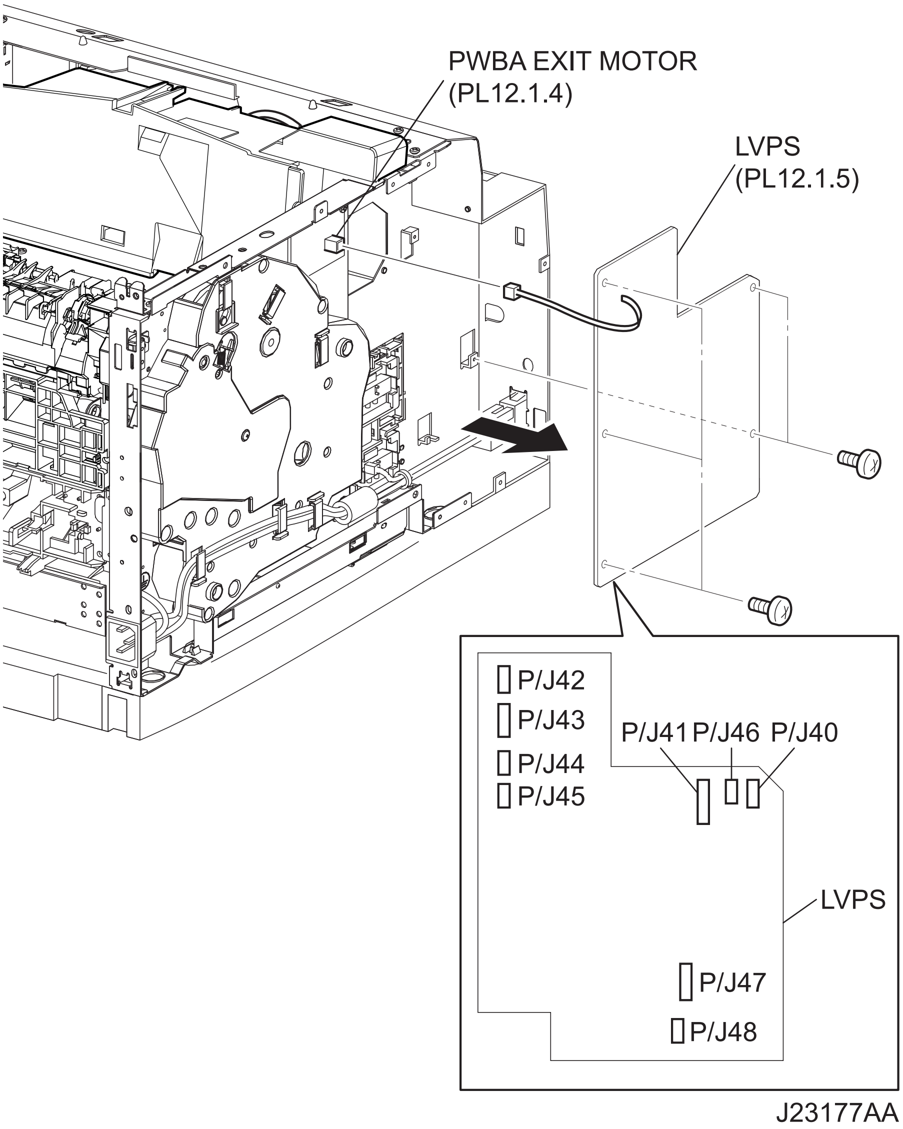
1) Install the PWBA EXIT MOTOR to the frame using the 2 screws (silver, 6mm).

2) Connect the harness connectors to the connectors (P/J101, P/J102 and P/J103) on the PWBA EXIT MOTOR.
3) Install the COVER LEFT (PL1.1.6). (RRP1.3)
4) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

5) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP12.3 LVPS (PL12.1.5)


PWBA EXIT MOTOR
(PL12.1.4)
LVPS
(PL12.1.5)
P/J42
P/J43
P/J44
P/J45
P/J41
P/J46
P/J40
LVPS
P/J47
P/J48
J23177AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
7) Remove the COVER TOP (PL1.1.7). (RRP1.4)

8) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
9) Remove the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
10) Disconnect the harness connector from the connector (P/J101) on the PWBA EXIT MOTOR (PL12.1.4).
11) Disconnect the harness connectors from the connectors (P/J40, P/J41, P/J42, P/J43, P/J44, P/J45, P/J46, P/J47 and P/J48) on the LVPS.
12) Remove the 5 screws (silver, 6mm) securing the LVPS to the frame.
13) Remove the LVPS.

Replacement

1) Install the LVPS to the frame using the 5 screws (silver, 6mm).
2) Connect the harness connectors to the connectors (P/J40, P/J41, P/J42, P/J43, P/J44, P/J45, P/J46, P/J47 and P/J48) on the LVPS.
3) Connect the connector of the harness LVPS to the connector (P/J101) on the PWBA EXIT MOTOR (PL12.1.4).
4) Install the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
5) Install the COVER FRONT (PL1.1.5). (RRP1.5)
6) Install the COVER TOP (PL1.1.7). (RRP1.4)
7) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
8) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)

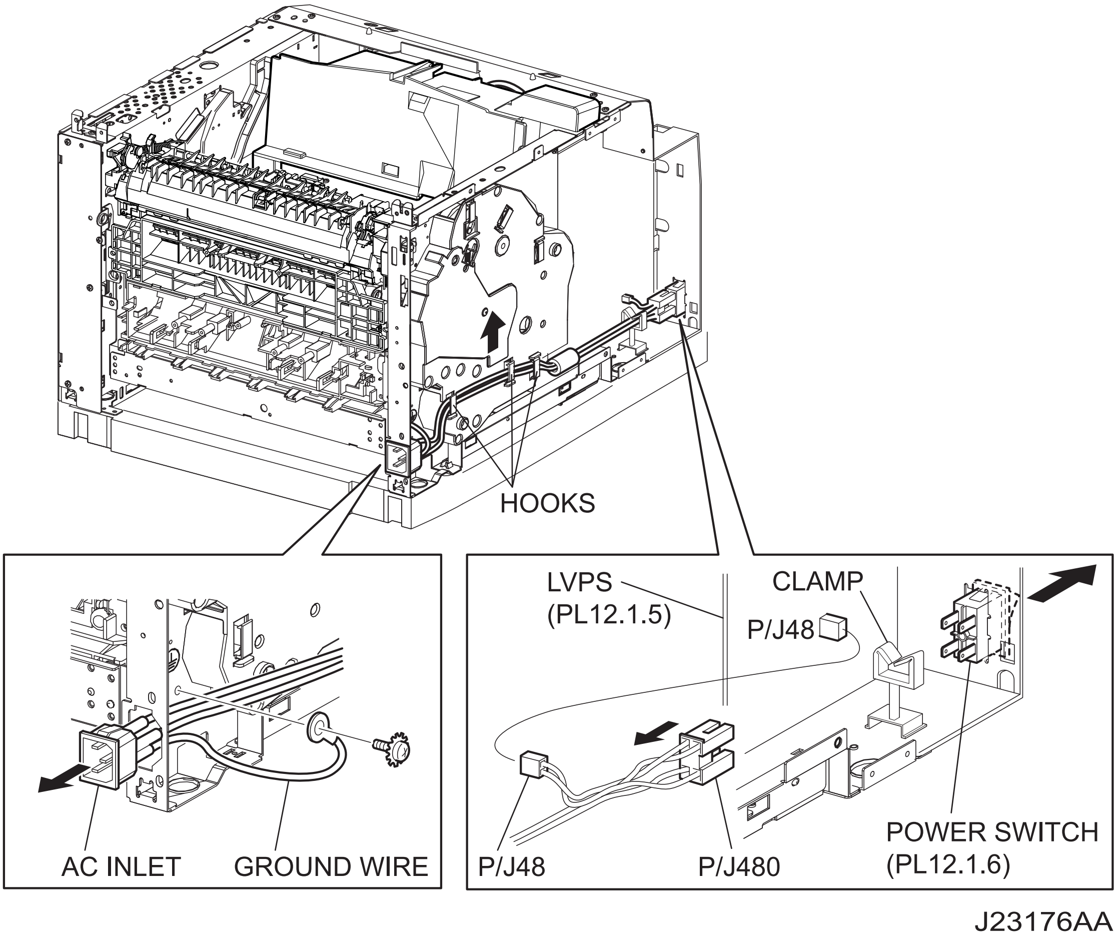
NOTE **When installing, pull the CHUTE EXIT FUSER lever.**

9) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
10) Install the COVER LEFT (PL1.1.6). (RRP1.3)
11) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

12) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP12.4 POWER SWITCH (PL12.1.6), HARNESS ASSY AC100V/AC200V (PL12.1.8)


HOOKS
AC INLET
GROUND WIRE
LVPS
(PL12.1.5)
CLAMP
P/J48
P/J48
P/J480
POWER SWITCH
(PL12.1.6)
J23176AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
7) Remove the COVER TOP (PL1.1.7). (RRP1.4)
8) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
9) Remove the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
10) Release the clamp of the HARNESS ASSY AC100V/AC200V from the clamp on the GEAR ASSY HOUSING (PL11.1.3).
11) Disconnect the connector (P/J480) of the HARNESS ASSY AC100V/AC200V from the POWER SWITCH.

12) Disconnect the connector (P/J48) of the HARNESS ASSY AC100V/AC200V from the LVPS (PL12.1.5).
13) Release the clamp of the HARNESS ASSY AC100V/AC200V,
14) Remove the screw (silver with toothed washer, 6mm) securing the ground terminal of the HARNESS ASSY AC100V/AC200V to the frame.
15) Pull out the HARNESS ASSY AC100V/AC200V from the hole at the rear of the frame.
16) Remove the POWER SWITCH from the frame.

Replacement

1) Install the POWER SWITCH to the frame.
2) Install the HARNESS ASSY AC100V/AC200V to the hole at the rear of the frame.
3) Secure the ground terminal of the HARNESS ASSY AC100V/AC200V to the frame using the screw (silver with toothed washer, 6mm).
4) Secure the HARNESS ASSY AC100V/AC200V.
5) Connect the connector (P/J48) of the HARNESS ASSY AC100V/AC200V to the LVPS (PL12.1.5).
6) Connect the connector (P/J480) of the HARNESS ASSY AC100V/AC200V to the POWER SWITCH.
7) Secure the HARNESS ASSY AC100V/AC200V using the clamps of the GEAR ASSY HOUSING (PL11.1.3).
8) Install the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
9) Install the COVER FRONT (PL1.1.5). (RRP1.5)
10) Install the COVER TOP (PL1.1.7). (RRP1.4)
11) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)

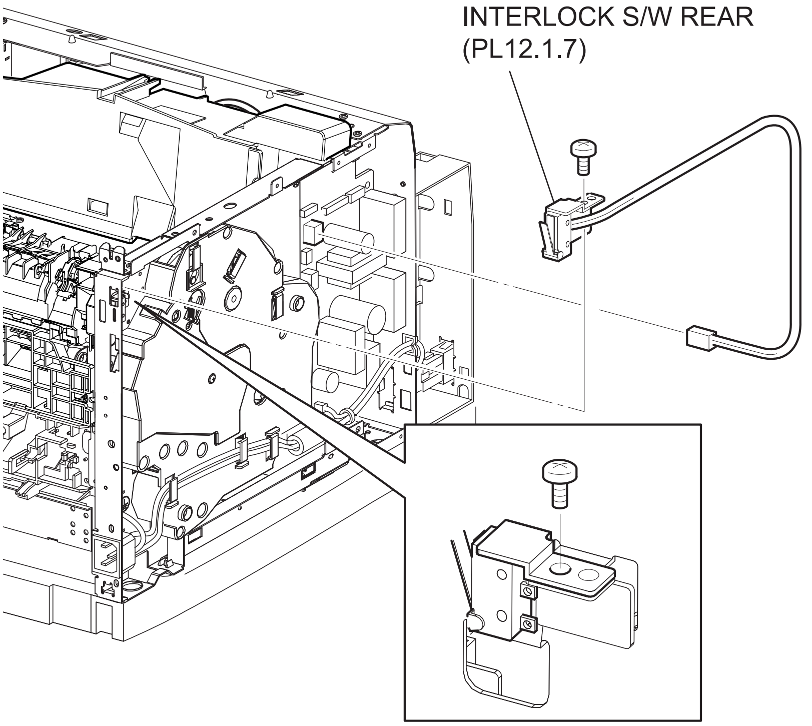
NOTE **When installing, pull the CHUTE EXIT FUSER lever.**

12) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
13) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
14) Install the COVER LEFT (PL1.1.6). (RRP1.3)
15) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

16) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP12.5 INTERLOCK S/W REAR (PL12.1.7)



JG3175AA

Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Remove the COVER LEFT (PL1.1.6). (RRP1.3)
4) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
5) Remove the COVER EXIT 500 (PL1.1.13). (RRP10.1)
6) Remove the 500 EXIT ASSY (PL10.1.2). (RRP10.2)
7) Remove the COVER TOP (PL1.1.7). (RRP1.4)
8) Remove the COVER FRONT (PL1.1.5). (RRP1.5)
9) Remove the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
10) Disconnect the connector (P/J44) of the INTERLOCK S/W REAR from the LVPS (PL12.1.5).
11) Release the clamps of the HARNESS ASSY INTERLOCK2 of the INTERLOCK S/W REAR from the clamps on the GEAR ASSY HOUSING (PL11.1.3).
12) Remove the screw (silver, 6mm) securing the INTERLOCK S/W REAR to the frame.
13) Remove the INTERLOCK S/W REAR.

Replacement

1) Install the INTERLOCK S/W REAR to the frame using the screw (silver, 6mm).
2) Secure the HARNESS ASSY INTERLOCK2 of the INTERLOCK S/W REAR to the clamps on the GEAR ASSY HOUSING (PL11.1.3).
3) Connect the connector (P/J44) of the INTERLOCK S/W REAR to the LVPS (PL12.1.5).
4) Install the SHIELD PLATE LVPS (PL12.1.3). (RRP12.1)
5) Install the COVER FRONT (PL1.1.5). (RRP1.5)
6) Install the COVER TOP (PL1.1.7). (RRP1.4)
7) Install the 500 EXIT ASSY (PL10.1.2). (RRP10.2)

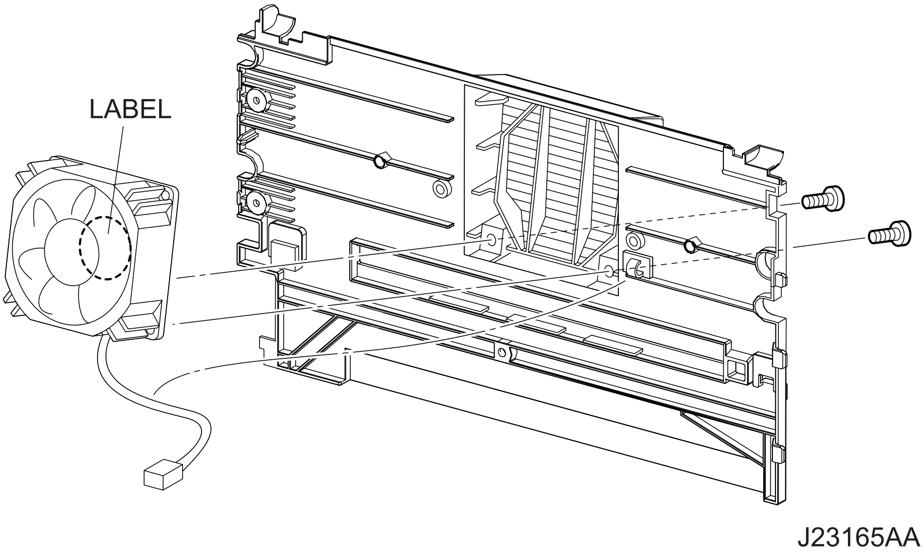
NOTE **When installing, pull the CHUTE EXIT FUSER lever.**

8) Install the COVER EXIT 500 (PL1.1.13). (RRP10.1)
9) Install the COVER RIGHT (PL1.1.4). (RRP1.2)
10) Install the COVER LEFT (PL1.1.6). (RRP1.3)
11) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

12) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP12.6 FAN MAIN (PL1.1.14)



Removal

1) Remove the COVER REAR 500 (PL10.2.21). (RRP10.9)
2) Remove the COVER REAR (PL1.1.3). (RRP1.1)
3) Release the harness clamps of the FAN MAIN.
4) Remove the 2 screws (silver tapping,8mm) securing the FAM MAIN to the COVER REAR, and remove the FAN MAIN.

Replacement

1) Install the FAN MAIN to the COVER REAR using the 2 screws (silver tapping, 8mm).

NOTE **When installing, be sure to install the FAN MAIN so that the label is facing outside.**

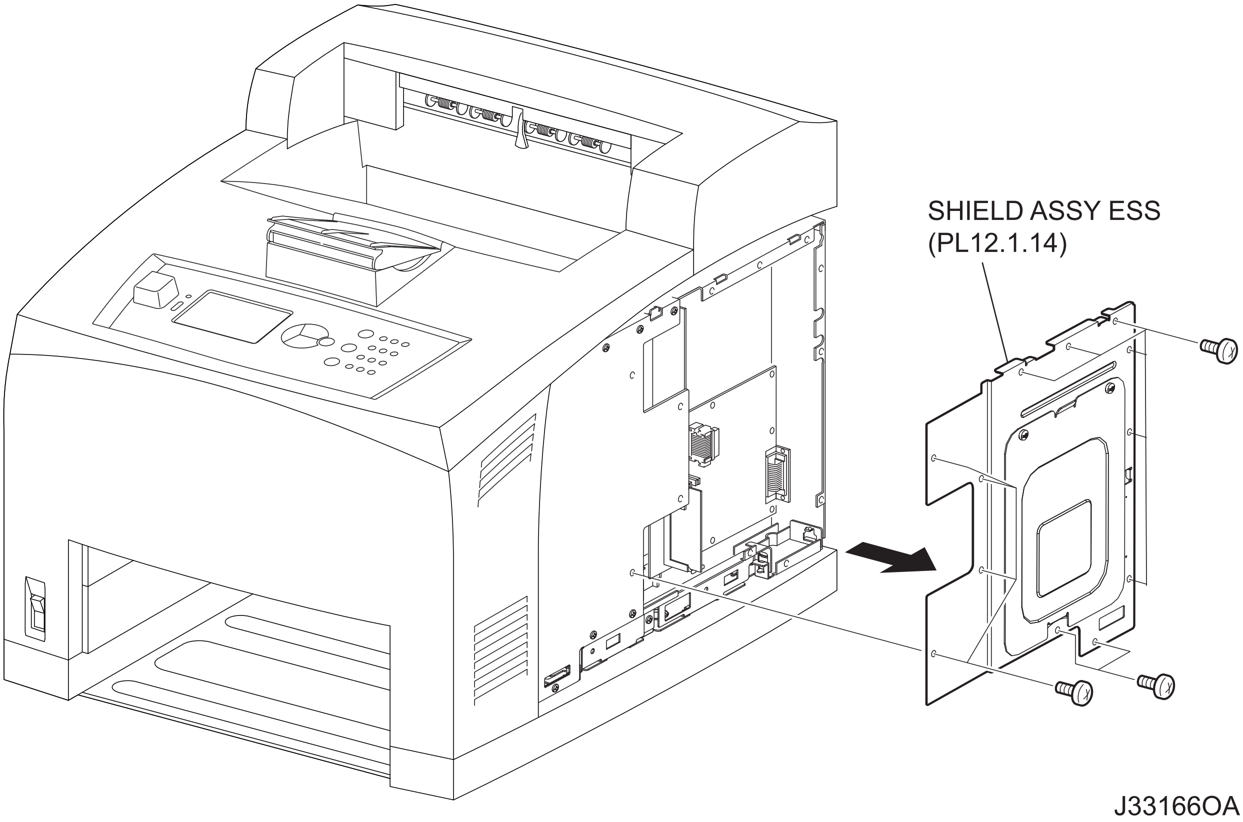
NOTE **When installing, make sure the harness have not pinched between the FAN MAIN and the COVER REAR.**

2) Fix the harness of the FAN MAIN with the clamp.
3) Install the COVER REAR (PL1.1.3). (RRP1.1)

NOTE **There are 2 kinds of screws, make sure they are put in the right place.**

4) Install the COVER REAR 500 (PL10.2.21). (RRP10.9)

RRP12.7 SHIELD ASSY ESS (PL12.1.14)



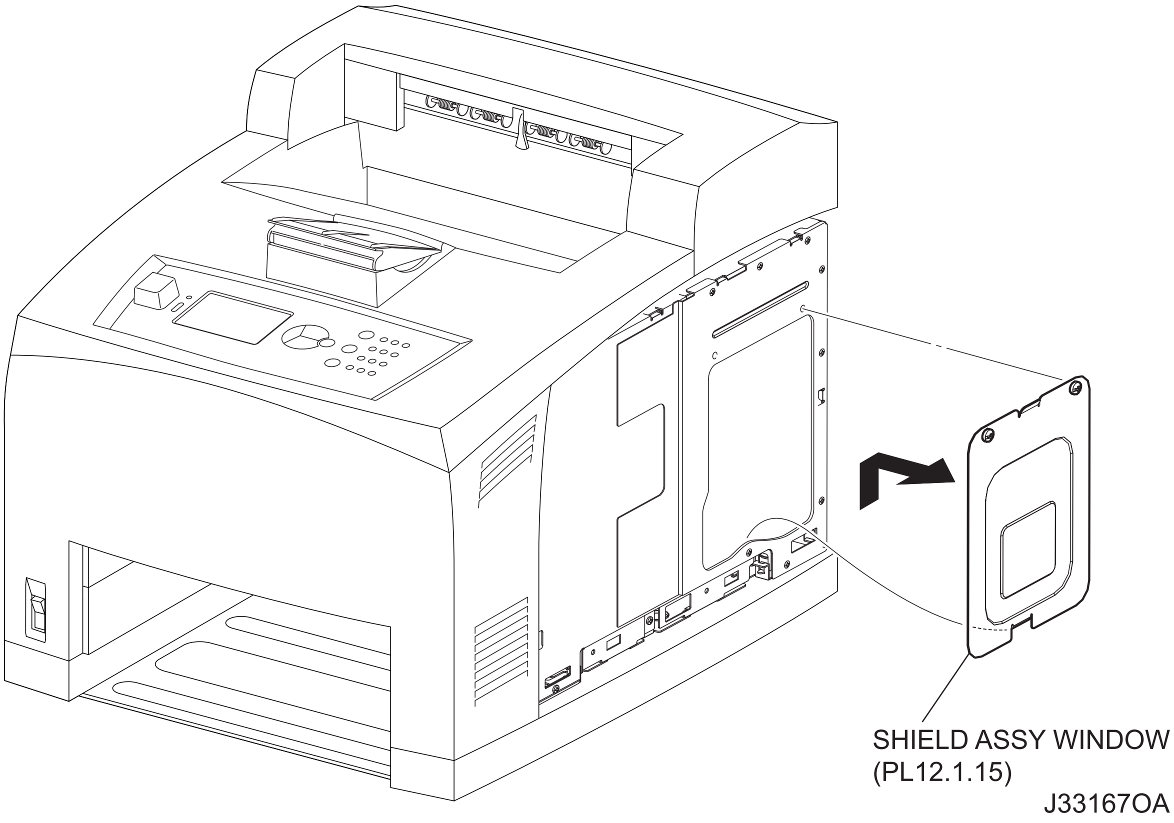
Removal

1) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
2) Remove the 12 screws (silver, 6mm) securing the SHIELD ASSY ESS to the frame.
3) Remove the SHIELD ASSY ESS.

Replacement

1) Install the SHIELD ASSY ESS to the frame using the 12 screws (silver, 6mm).
2) Install the COVER RIGHT (PL1.1.4). (RRP1.2)

RRP12.8 SHIELD ASSY WINDOW (PL12.1.15)



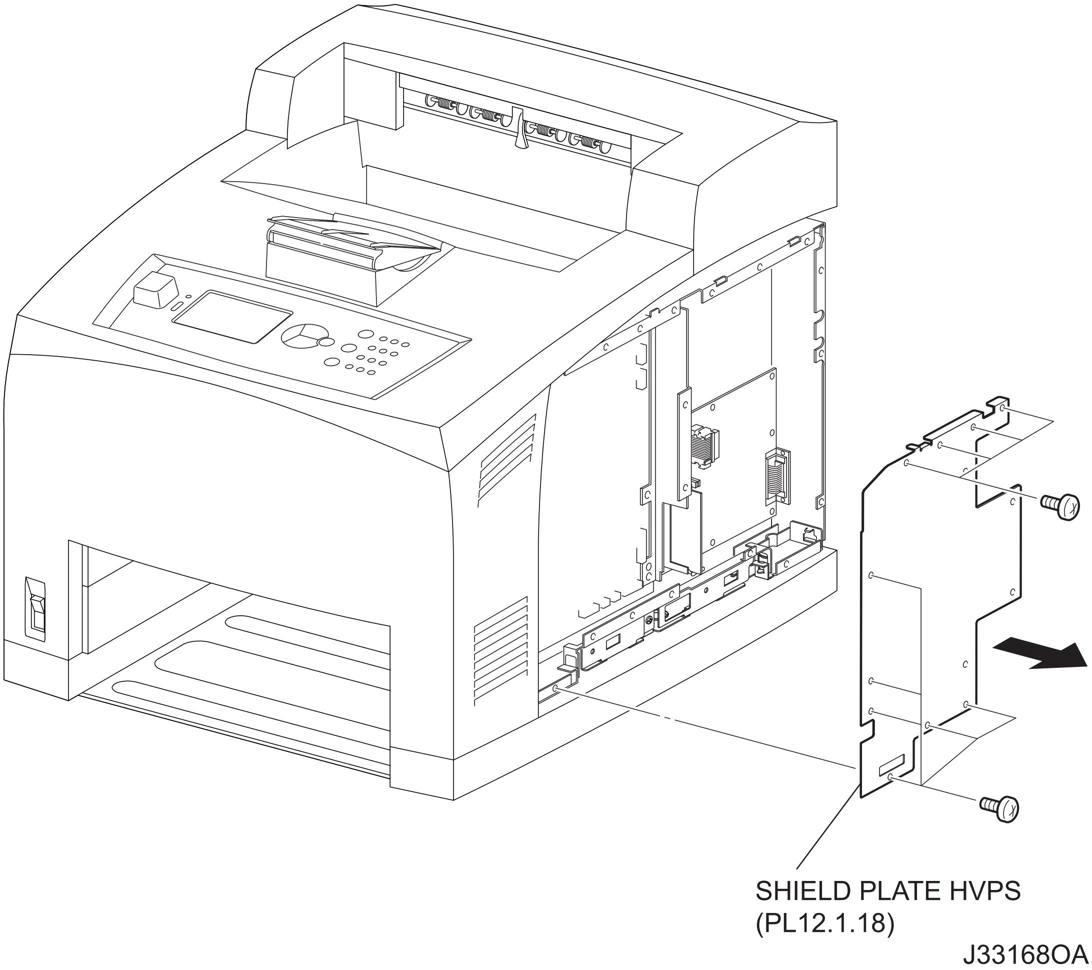
Removal

1) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
2) Remove the 2 screws securing the SHIELD ASSY WINDOW to the frame.
3) Remove the SHIELD ASSY WINDOW.

Replacement

1) Install the SHIELD ASSY WINDOW to the frame using the 2 screws.
2) Install the COVER RIGHT (PL1.1.4). (RRP1.2)

RRP12.9 SHIELD PLATE HVPS (PL12.1.18)



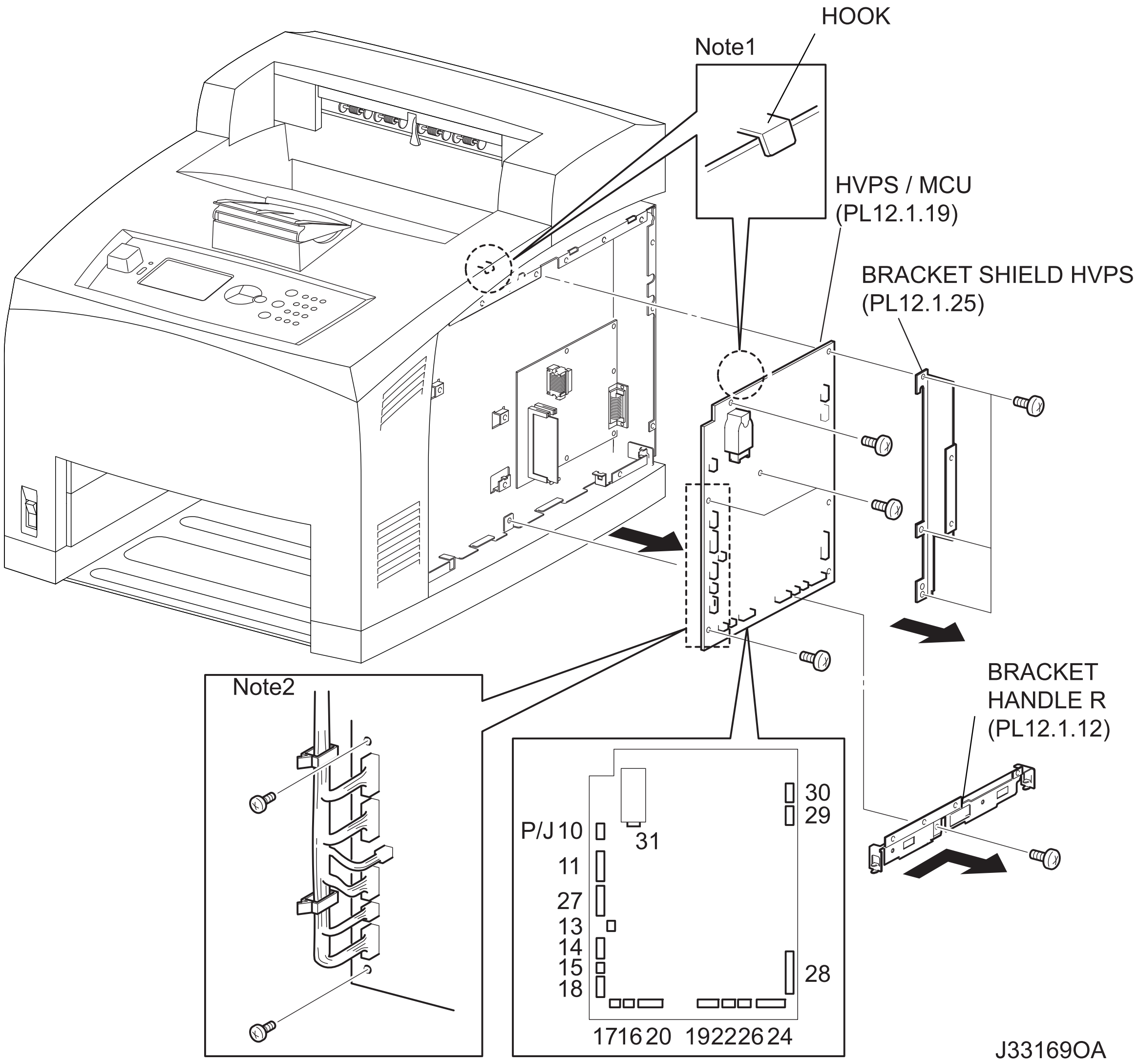
Removal

1) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
2) Remove the SHIELD ASSY ESS (PL12.1.14). (RRP12.7)
3) Remove the 10 screws (silver, 6mm) securing the SHIELD PLATE HVPS to the frame.
4) Remove the SHIELD PLATE HVPS.

Replacement

1) Install the SHIELD PLATE HVPS to the frame using the 10 screws (silver, 6mm).
2) Install the SHIELD ASSY ESS (PL12.1.14). (RRP12.7)
3) Install the COVER RIGHT (PL1.1.4). (RRP1.2)

RRP12.10 HVPS/MCU (PL12.1.19)


HOOK
Note1
HVPS / MCU
(PL12.1.19)
BRACKET SHIELD HVPS
(PL12.1.25)
BRACKET
HANDLE R
(PL12.1.12)
Note2
P/J 10
11
27
13
14
15
18
31
30
29
28
17
16
20
19
22
26
24
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Removal

1) Remove the COVER RIGHT (PL1.1.4). (RRP1.2)
2) Remove the SHIELD ASSY ESS (PL12.1.14). (RRP12.7)
3) Remove the SHIELD PLATE HVPS (PL12.1.18). (RRP12.9)
4) Remove the screw (silver, 6mm) securing the BRACKET HANDLE R (PL12.1.12) to the frame.
5) Remove the BRACKET HANDLE R from the frame.
6) Disconnect the harness connectors from the connectors (P/J10, P/J11, P/J13, P/J14, P/J15, P/J16, P/J17, P/J18, P/J20, P/J22, P/J24, P/J26, P/J 27, P/J 28, P/J29, P/J30, and P/J31) on the HVPS/MCU.

7) Remove the 3 screws (silver, 6mm) securing the BRACKET SHIELD HVPS (PL12.1.25) to the frame.
8) Remove the BRACKET SHIELD HVPS.
9) Remove the 4 screws (silver, 6mm) securing the HVPS/MCU to the frame.
10) Remove the HVPS/MCU.

Replacement

1) Install the HVPS/MCU to the frame using the 4 screws (silver, 6mm).

NOTE **When installing the HVPS/MCU, install the board under the hook of the frame. (NOTE 1)**

NOTE **When tightening the screws, be careful not to pinch the harness between the board and frame. (NOTE 2)**

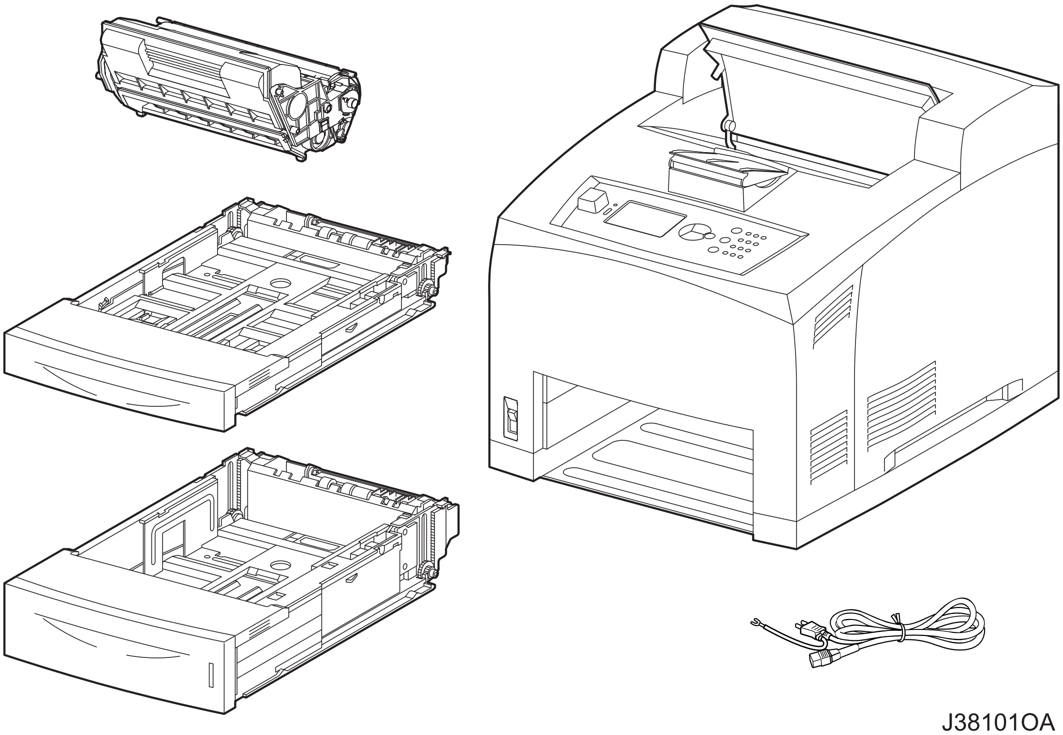
2) Connect the connectors of the harness to the connectors (P/J10, P/J11, P/J13, P/J14, P/J15, P/J16, P/J17, P/J18, P/J20, P/J22, P/J24, P/J26, P/J 27, P/J 28, P/J29, P/J30, and P/J31) on the HVPS/MCU.
3) Install the BRACKET SHIELD HVPS (PL12.1.25) to the frame using the 3 screws (silver, 6mm).
4) Install the BRACKET HANDLE R (PL12.1.12) to the frame using the screw (silver, 6mm).
5) Install the BRACKET SHIELD HVPS to the frame using the 3 screws (silver, 6mm).
6) Install the SHIELD PLATE HVPS (PL12.1.18). (RRP12.9)
7) Install the SHIELD ASSY ESS (PL12.1.14). (RRP12.7)
8) Install the COVER RIGHT (PL1.1.4). (RRP1.2)

8. Machine Structure

8.1 Fundamental Structure

The fundamental structure of the machine consists of “print engine”, “EP CARTRIDGE”, “paper cassette”, and “power code”.

♦ 550 Paper Cassette - Type



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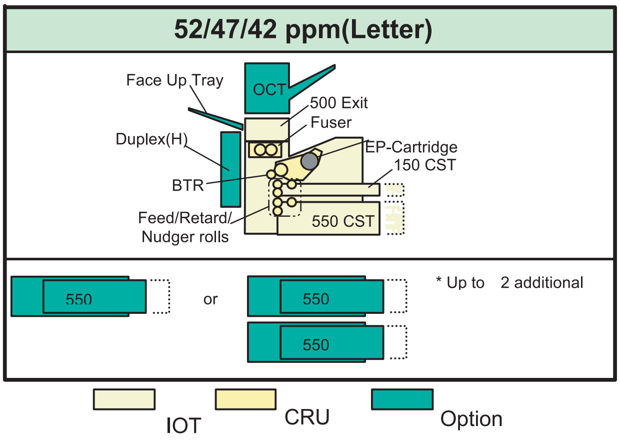
8.2 Optional Structure

The optional structure of the machine is shown below.


52/47/42 ppm(Letter)
Face Up Tray
OCT
500 Exit
Fuser
Duplex(H)
EP-Cartridge
150 CST
BTR
Feed/Retard/
Nudger rolls
550 CST
550
or
550
550
* Up to 2 additional
IOT
CRU
Option

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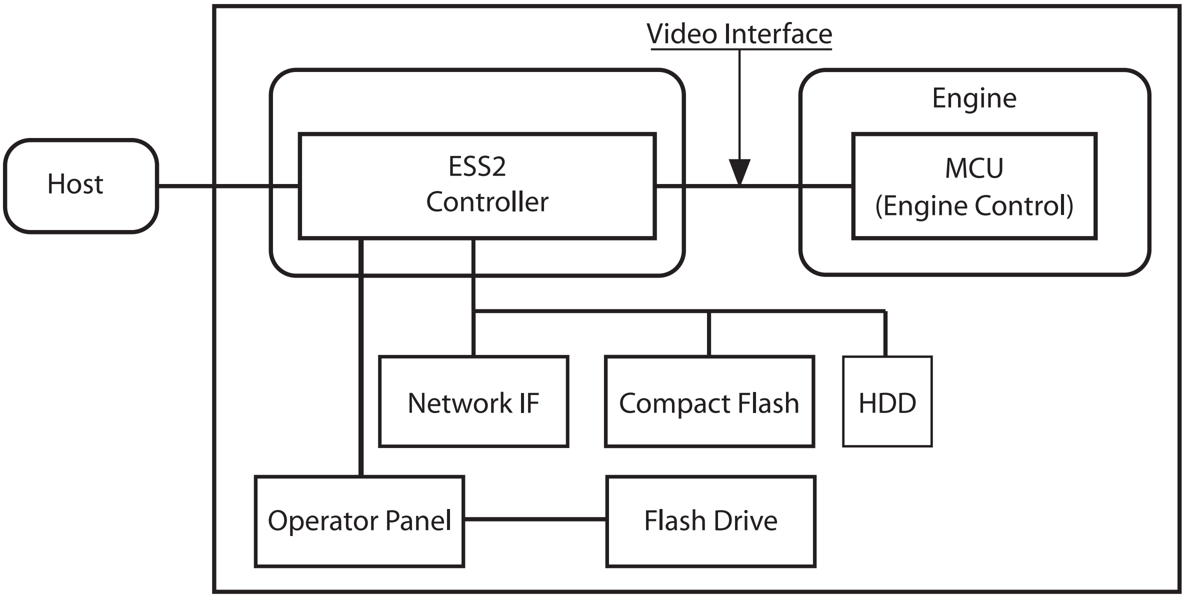
8.3 Functional Structure

The functional structure of the machine is shown below.


Video Interface
Host
ESS2
Controller
Engine
MCU
(Engine Control)
Network IF
Compact Flash
HDD
Operator Panel
Flash Drive

8.1 Electrical Characteristics

8.1.1 Power Supply

The following two types are available as power supplies used to supply power for operation. A selection is made according to the specifications.

- ♦<120 V system>: Voltage: 98 to 140 VAC; Frequency: 50/60 Hz ± 3 Hz
- ♦ <220 V system>: Voltage: 198 to 264 VAC; Frequency: 50/60 Hz ± 3 Hz

8.1.2 Power Consumption

Maximum power consumption during operation, current consumption during operation, and power consumption in sleep mode (including pseudo-printer controller of 5 VDC, 6 A).

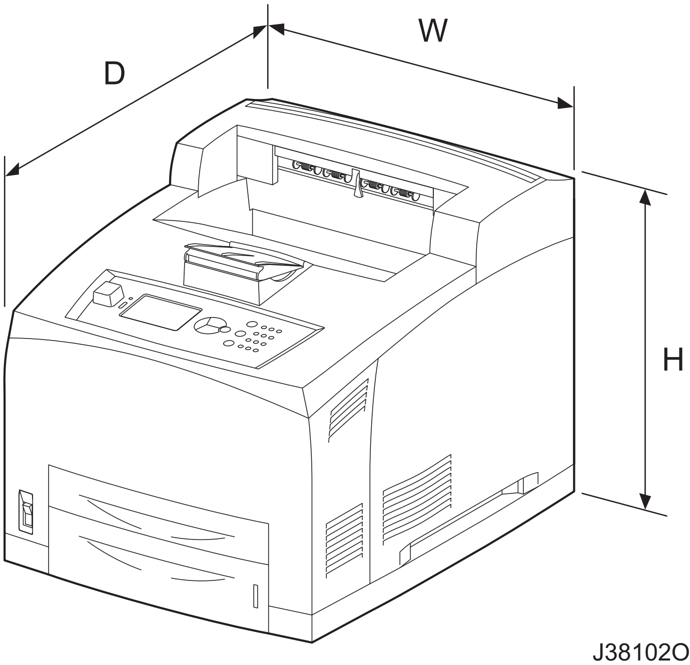
Input power (rated)	Maximum power consumption	Current consumption	Power consumption		
	Machine	Machine	In sleep mode		In deep sleep mode (Fan Stop)
			At low fan speed	At fan stop	
120 VAC	1300 W or lower	11.9 A	56 W	31 W	6.4 W or lower
220 VAC	1200 W or lower	6.45 A	56 W	31 W	8.3 W or lower

8.2 Mechanical Characteristics

8.2.1 Dimensions/Mass of the Main Body

None of the EP CARTRIDGE, printer controller, AC cable, and their accessories are included. Partial protrusions are not included either.

Width (W):	421.8 mm	
Depth (D):	465.4 mm	(524.0 mm when Paper Cassette is extended) (611.6 mm when Duplex Unit installed) (670.2 mm when Paper Cassette is extended and Duplex Unit installed)
Height (H):	404.3 mm	
Mass:	21.1 kg	(23.2 kg when Duplex Unit installed)



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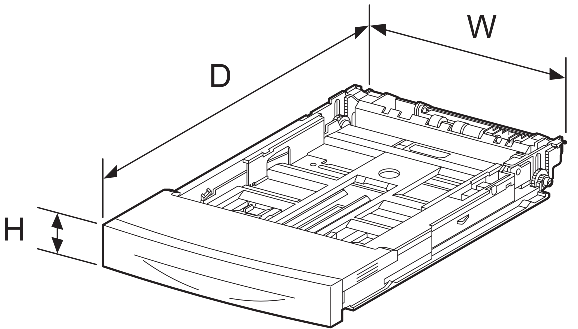
8.2.2 Dimensions/Mass of 150 Paper Cassette

The dimensions are specified under the same posture as installed in the machine. Partial protrusions are not included.

Width (W): 283.7 mm
Depth (D): 390.6 mm (449.2 mm when extended)
Height (H): 50.4 mm
Mass: 1.60 kg



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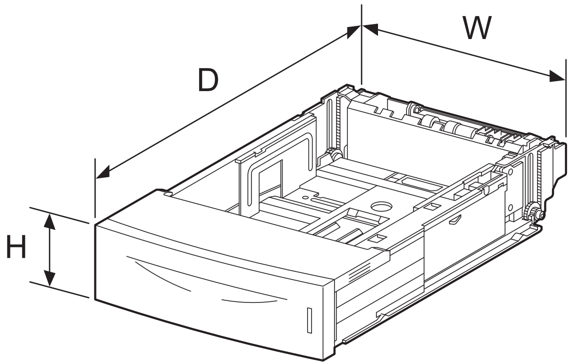
8.2.3 Dimensions/Mass of 550 Paper Cassette

The dimensions are specified under the same posture as installed in the machine. Partial protrusions are not included.

Width (W): 283.7 mm
Depth (D): 394.6 mm (453.2 mm when extended)
Height (H): 85.6 mm
Mass: 2.12 kg



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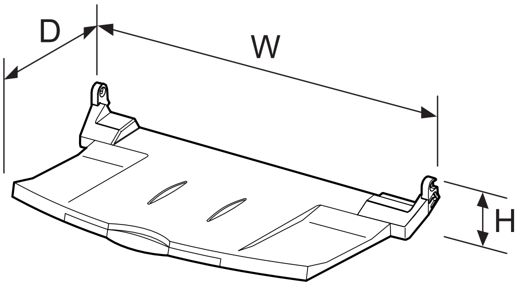
8.2.4 Dimensions/Mass of Option Face Up Tray

The dimensions are specified under the same posture as installed in the machine. Partial protrusions are not included.

Width (W):	326.0 mm
Depth (D):	162.6 mm (246.7 mm when extended)
Height (H):	43.0 mm
Mass:	0.25 kg



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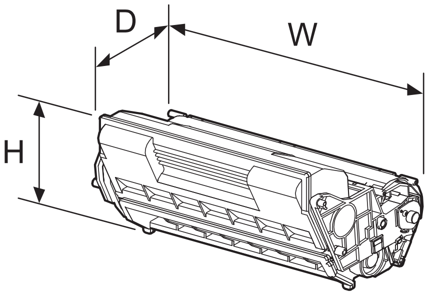
8.2.5 Dimensions/Mass of EP CARTRIDGE

The dimensions are specified under the same posture as installed in the machine. Partial protrusions are not included.

Width (W):	299.9 mm
Depth (D):	177.4 mm
Height (H):	159.0 mm
Mass: /	1.80 kg(REF)*1 / 1.94 kg(REF)*2 2.18 kg(REF)*3



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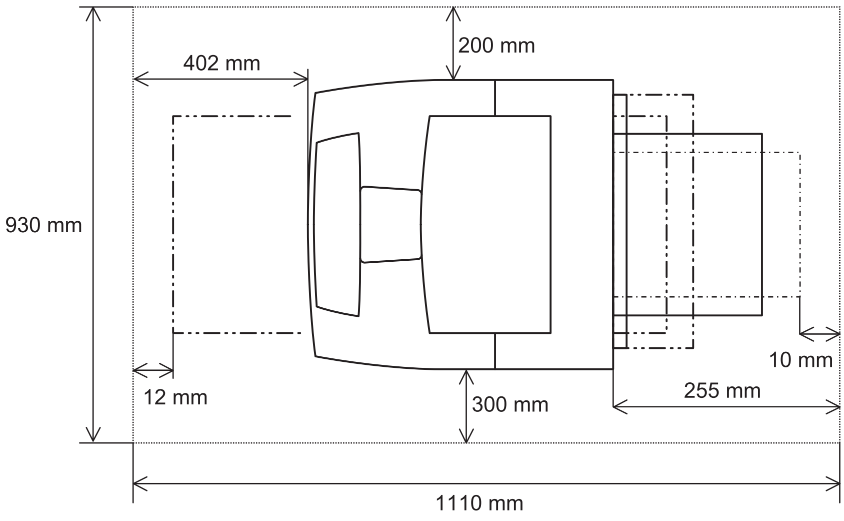
*1: 10,000-sheet EP CARTRIDGE (packed in the body)
*2: 15,000-sheet EP CARTRIDGE
*3: 20,000-sheet EP CARTRIDGE

Reference: *Average number of prints at Letter size and 5% black ratio*

8.2.6 Installation Space (Minimum Installation Space)

The minimum space required to install the machine for normal use is as follows (excluding the space occupied by the operator).

- In the height direction, 400 mm must be secured from the top surface of the machine.



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8.3 Functions

8.3.1 Recording System

Electrophotography (roller charging, magnetic monocomponent toner development)

8.3.2 Exposure System

Semiconductor laser beam scanning

8.3.3 Transfer System

Roller transfer system

8.3.4 Fixing System

Thermal fixing using a heat roller

8.3.5 Resolution

Switched between 600 dpi and 1200 dpi.

Reference: “dpi” is an abbreviation of “dots per inch”.

8.3.6 Warm-Up Time

Time until printing is made possible after the power is turned ON.

Power Supply	Warm Up Time	
	High Speed model 52ppm(Letter)	Middle /Low Speed model 47/42ppm(Letter)
120V/220V	15 sec	17Sec

8.3.7 FPOT (First Print Output Time)

FPOT (First Print Output Time) is the time from the instant when START command is received in READY state to the instant when the first sheet is output. The following values are theoretical values.

Configuration		Paper Size	Mode	Tray 1 (T sec)	Tray 2 (T sec)	Tray 3 (T sec)	Tray 4 (T sec)
Tray 2	Exit						
550	500	Letter (SEF)	simplex	7.9	7.9	7.9	8.2
			Duplex	11.1	11.1	11.1	11.3
		A4 (SEF)	simplex	7.9	7.9	7.9	8.2
			Duplex	11.2	11.2	11.2	11.4

Reference: ***FPOT form sleep mode.***

Configuration		Paper Size	Mode	Tray 1 (T sec)	Tray 2 (T sec)	Tray 3 (T sec)	Tray 4 (T sec)
Tray 2	Exit						
550	500	Letter (SEF)	simplex	24.9	24.9	24.9	25.2
			Duplex	28.1	28.1	28.1	28.3
		A4 (SEF)	simplex	24.9	24.9	24.9	25.2
			Duplex	28.2	28.2	28.2	28.4

Reference: ***"SEF" is an abbreviation of "Short Edge Feed", and means the case where feeding is done from the shorter side of the paper.***

8.3.8 Continuous Print Speed

8.3.8.1 High Speed Model (52ppm (Letter))

Paper Size	Simplex					Duplex			
	Thin Paper/ Normal Mode (ppm)	OHP Mode (1/2 Speed) (ppm)	Thick Stock Mode1/ Label Mode (ppm)	Thick Stock Mode2 (ppm)	Thick Stock Mode3 (1/2 P/S) (ppm)	Duplex (ipm)	Thick Stock Mode1 (ipm)	Thick Stock Mode2 (ipm)	Thick Stock Mode3 (1/2 Speed) (ipm)
Letter SEF	52.6	26.3	38.5	15.2	26.3	29.9	27.1	15.2	17.4
A4 SEF	50.0	25.0	38.5	15.2	25.0	29.0	26.7	15.2	16.8
Legal 14" SEF	43.0	-	38.5	15.2	21.5	26.5	25.6	15.2	15.2
Legal 13" SEF	45.8	-	38.5	15.2	22.9	27.5	26.1	15.2	15.8
Executive	52.6	-	38.5	15.2	26.3	30.2	27.3	15.2	17.6
B5 (JIS) SEF	52.6	-	38.5	15.2	26.3	30.4	27.5	15.2	17.8
Envelopes(com10	-	-	23.0	15.2	26.3	-	-	-	-

8.3.8.2 Middle Speed Model (47ppm (Letter))

Paper Size	Simplex					Duplex			
	Thin Paper/ Normal Mode (ppm)	OHP Mode (1/2 Speed) (ppm)	Thick Stock Mode1/ Label Mode (ppm)	Thick Stock Mode2 (ppm)	Thick Stock Mode3 (1/2 P/S) (ppm)	Duplex (ipm)	Thick Stock Mode1 (ipm)	Thick Stock Mode2 (ipm)	Thick Stock Mode3 (1/2 Speed) (ipm)
Letter SEF	47.4	22.6REF	33.0REF	13.1REF	22.6REF	27.6REF	24.5REF	13.1REF	15.6REF
A4 SEF	45.1	21.5REF	33.0REF	13.1REF	21.5REF	26.8REF	24.2REF	13.1REF	15.1REF
Legal 14" SEF	38.8	-	33.0REF	13.1REF	18.6REF	24.4REF	23.2REF	13.1REF	13.6REF
Legal 13" SEF	41.3	-	33.0REF	13.1REF	19.8REF	25.4REF	23.6REF	13.1REF	14.2REF
Executive	47.4	-	33.0REF	13.1REF	22.6REF	27.9REF	24.7REF	13.1REF	15.8REF
B5 (JIS) SEF	47.4	-	33.0REF	13.1REF	22.6REF	28.2REF	24.9REF	13.1REF	16.0REF
Envelopes(com10	-	-	19.7REF	13.1REF	22.6REF	-	-	-	-

8.3.8.3 Low Speed Model (42ppm (Letter))

Paper Size	Simplex					Duplex			
	Thin Paper/ Normal Mode (ppm)	OHP Mode (1/ 2 Speed) (ppm)	Thick Stock Mode1/ Label Mode (ppm)	Thick Stock Mode2 (ppm)	Thick Stock Mode3 (1/2 P/S) (ppm)	Duplex (ipm)	Thick Stock Mode1 (ipm)	Thick Stock Mode2 (ipm)	Thick Stock Mode3 (1/2 Speed) (ipm)
Letter SEF	42.0	22.6REF	33.0REF	13.1REF	22.6REF	26.6REF	24.5REF	13.1REF	15.6REF
A4 SEF	40.1	21.5REF	33.0REF	13.1REF	21.5REF	25.9REF	24.2REF	13.1REF	15.1REF
Legal 14" SEF	35.0	-	33.0REF	13.1REF	18.6REF	23.6REF	23.2REF	13.1REF	13.6REF
Legal 13" SEF	35.0	-	33.0REF	13.1REF	19.8REF	24.6REF	23.6REF	13.1REF	14.2REF
Executive	37.0	-	33.0REF	13.1REF	22.6REF	26.9REF	24.7REF	13.1REF	15.8REF
B5 (JIS) SEF	42.0	-	33.0REF	13.1REF	22.6REF	27.1REF	24.9REF	13.1REF	16.0REF
Envelopes(com10	-	-	19.7REF	13.1REF	22.6REF	-	-	-	-

Reference: ***"ppm" is an abbreviation of "Prints Per Minute."***

Reference: ***"SEF" is an abbreviation of "Short Edge Feed", and means the case where feeding is done from the shorter side of the paper.***

8.3.9 Feedable Paper Size/Printable Area

8.3.9.1 Feedable Paper Size

The minimum and maximum sizes of paper that can be fed by the machine are as follows:

- ♦ 150 Paper Feeder
  - Width: 76.2 mm (min) to 215.9 mm (max)
  - Length: 127.0 mm (min) to 355.6 mm (max)

- ♦ 550 Paper Feeder
  - Width: 98.4 mm (min) to 215.9 mm (max)
  - Length: 148.0 mm (min) to 355.6 mm (max)

8.3.9.2 Printable Area

The print engine shall be capable of producing printed images meeting the Print Quality Spec to within 4 mm of the edge of the paper.

8.4 Input Characteristics

8.4.1 Paper Feeding Method

Paper is fed with a paper tray set in the feeding mechanism at the bottom of the machine.
<Three kinds of paper trays can be set in the machine: 150 Paper Cassette, 550 Paper Cassette, and Option 550 Paper Cassette.>

NOTE **Optional paper feed units can be installed. Paper feeding can be done from four locations at maximum.**

Reference: For feedable paper size/weight, refer to "4.12 Paper" in this chapter.

8.4.1.1 Paper Feeding Capacity

- ♦ 150 Paper Cassette
  Plain Paper: Less than 150 sheets of standard paper or less than 17.5 mm of paper level
- ♦ 550 Paper Cassette
  Plain Paper: Less than 550 sheets of standard paper or less than 59.4 mm of paper level

8.4.1.2 Combinations of Paper Feeders and Total Number of Sheets Fed

Up to 4 stages can be combined using the body and optional paper feeders. Based on standard paper, the total number of sheets fed and combinations are as follows:

♦ 550 Paper Cassette

Combination	1st stage (standard)	2nd stage (standard)	3rd stage (optional)	4th stage (optional)	Total number of sheets fed
1	150 sheets	550 sheets	No	No	700 sheets
2	150 sheets	550 sheets	550 sheets	No	1250 sheets
3	150 sheets	550 sheets	550 sheets	550 sheets	1800 sheets

8.5 Output Characteristics

8.5.1 Paper Output Method

Paper can be output by the following methods:

- Face-down output
  Paper is output onto the top cover (COVER TOP ASSY) of the machine with the printed surface downward.
- Face-up output (Option)
  Paper is output onto the Face Up Tray with the printed surface upward.

8.5.2 Paper Output Capacity

NOTE **The following is specified for paper immediately after taken out of its package at an environment temperature/humidity of 22°C/55-60%RH.**

Paper	Number of sheets the paper output section holds
FUJI XEROX P Paper A4 SEF	500 sheets
4200 20lb Letter SEF	500 sheets
RX 80 A4 (3R91720) SEF	500 sheets

8.3.1 Supported paper size

- Option Face Up Tray
  Width: 88.9 mm to 215.9 mm
  Length: 127.0 mm to 297.0 mm

8.6 Paper

8.6.1 Types of Paper

The types of paper that can be used in the machine are classified into “standard paper”, “general-purpose paper”, and “special-purpose paper.”

♦ Standard paper

This is a recommended paper, whose reliability, feedability, and print quality fall within the range of the specifications.

The following types of paper are taken as standard paper:

- FUJI XEROX P (A4 size)
- XEROX 4200 201b (Letter size)
- RX 80; 3R91720 (A4 size)

♦ General-purpose paper

This is a plan paper other than standard paper, whose reliability and feedability fall within the range of the specifications, but whose print quality is outside the range.

The following types of paper are taken as general-purpose paper.

* Hammermill Tidal MP	(Letter Size)
* Boise Cascade X-9000	(Letter Size)
* Hammermill Photo White	(Letter Size)
* Hammermill Fore MP	(Letter Size)
* Business 80	(A4 Size)
* Steinbeis Recycled	(A4 Size)
* Conqueror A4 90 gsm Laid Laser Paper	(A4 Size)
* Multicopy Nymolla	(A4 Size)
* Premier 80	(A5 Size)
* Premier 90	(A4 Size)
* Berga Focus 80 GSM	(A4 Size)
* FX P	(B5 Size)
* FX Green 70	(A4 Size)
* FX EP-R	(A4 Size)
* FX EP-R	(B5 Size)

♦ Special-purpose paper

This is a special-purpose paper other than plain paper, whose reliability and feedability fall within the range of the specifications, but whose print quality is outside the range.

NOTE

Where special-purpose paper is fed from an optional paper feed unit, the reliability and feedability are also outside the range of the specifications.

The following kinds of paper are taken as special-purpose paper.

- OHP Film
- Label Paper
- Envelope
- Postal Card
- Colored Paper
- Tracing Paper

- Thick Paper
- Punched Paper
- Perforated Paper
- Strips of Paper
- LaserAce A
- Recycled Paper (EP and R)

8.3.2 Paper Weight

- ♦ Paper fed from the paper tray

  64 to 216 g/m^2

8.6.2 Paper Size

The following table shows the paper sizes that can be set in each paper feed section. (“O” indicates an available paper size.)

Every kind of paper is set in the SEF (Short Edge Feed) direction.

Type	Paper size (mm × mm)	Paper Tray	
		150 Paper Feeder	550 Paper Feeder
LEGAL14”	215.9 × 355.6	O	O
LEGAL13”	215.9 × 330.2	O	O
LETTER	215.9 × 279.4	O	O
EXECTIVE	184.2 × 266.7	O	O
STATEMENT	139.7 × 215.9	O	O
A4	210.0 × 297.0	O	O
B5 (JIS)	182.0 × 257.0	O	O
B5 (ISO)	176.0 × 250.0	O	O
A5	148.0 × 210.0	O	O
A6	105.0 × 148.5	O	O
Commercial #10	104.8 × 241.3	O	O
Envelope C5	162.0 × 229.0	O	X
Envelope DL	110.0 × 220.0	O	O
Monarch	98.4 × 190.5	O	O
Official Postal Card	100.0 × 148.0	O	O

US Official Postal Card	88.9 × 139.7	O	X
Index Card	76.2 × 127.0	O	X

8.7 Consumables

Although consumables are replaced by the user, when a fault due to consumables has occurred and repairs are necessary, or when faults are classified and tracked down, consumables may be replaced by the serviceman.

8.7.1 Consumable Items

- Paper

  Refer to the above-mentioned specifications of paper.

- EP CARTRIDGE

  This is an integrated cartridge consisting of an OPC drum, black toner, a development unit, a charging unit, and a drum cleaner unit. 10,000-sheet, 15,000-sheet and 20,000-sheet print cartridges can be selected.

  “Detection using the remaining amount of toner” (factory optional) is available to detect the life of the EP CARTRIDGE. When the cartridge runs out of toner, a WARNING status signal is sent to the controller.

NOTE

The number of prints of each toner cartridge is a rough measure under environments of 22°C/55-60%RH and under conditions of continuous feeding of standard paper (Letter-size) with 5% image coverage.

8.8 Regularly Replaced Parts

To prevent faults, the following parts are recommended to be replaced at every given number of prints.

NOTE

The life of each of the following regularly replaced parts is indicated by the number of prints, which is a rough measure under environments of 22°C/55-60%RH and under conditions of continuous feeding of standard paper (Letter-size) with 5% image coverage.

Parts	Specifications (in prints)
FUSER ASSY	200,000
KIT ROLL ASSY FEED *1	200,000
BTR ASSY *2	200,000

*1: A kit consisting of major, field, and retard rolls.

*2: In duplex printing, printing on both surfaces is transformed into 2 PVs (print volumes).

8.9 Use Environment

8.9.1 Installation Temperature/Humidity

During operation:	5 to 35°C / 15 to 85%RH (At 35°C, 70%RH is the upper limit. At 85%RH, 32°C is the upper limit. No condensation.)
During non-operation:	-20 to 40°C / 5 to 85%RH (no condensation)

NOTE

The environment where the image quality is guaranteed is different from the above-described environment.

8.9.2 Installation Height

0 to 3,500 m

8.9.3 Installation Horizontally

The machine must be installed horizontally at a tilt within 5°.

8.9.4 Installation Surrounding Light

Less than 3000 Lux (no direct sunshine)

8.9.5 Generated Noise

During operation:	less than7.20 B (A) less than 7.73 B (A) (when options are fully installed)
During standby:	less than 5.50 B (A)

NOTE

Full Option = Machine + Option 550 Paper Feeder (two stages) +Duplex + OCT

8.10 Safety/Environmental Protection

8.10.1 Safety Standards

- 120V system
  UL60950-1, 2nd Edition
  CSA C22.2 No.60950-1-03 or equivalent
- 220V system
  IEC 60950-1 2nd Edition

8.10.2 Laser Safety Standards

- 120V system
  FDA21CFR Chapter 1, Subchapter J, Section 1010, 1040
- 220V system
  IEC60825-1 Class I Laser Product

8.10.3 EMI

- 120V system
  FCC Part15 Subpart B, Class B (ANSI C63.4)
- 220V system
  EN55022 (CISPR Publication 22)

8.11 Print Image Quality

8.11.1 Environment where Image Quality is Guaranteed

Condition	Temperature	Humidity	Remarks
Installation image quality (1-500 prints)	18 to 27°C	20 to 65%RH	Measured at 22°C, 55%RH
Used image quality (more than 501 prints*)	10 to 32°C	15 to 85%RH	

*Upper limit of EP CARTRIDGE

8.11.2 Image Quality Guaranteed Paper

Image quality is specified using standard paper immediately after taken out of its package that was allowed to stand in an operative environment for 12 hours in packaged condition.
Items associated with print matching are specified with Letter-size standard paper.

8.11.3 Print Matching

- Lead edge registration: less than ± 2.0 mm
- Side edge registration: less than ± 2.5 mm
- Skew feeding: less than ± 1.2 mm (at distance of 190 mm)
- Perpendicularity: less than ± 0.8 mm (at distance of 114.5 mm)
- Parallelism: less than ± 1.2 mm (at distance of 234 mm)
- Linearity of paper transport direction:less than ± 0.5 mm (at distance of 234 mm)
- Linearity of the direction vertical to paper transport direction:
  less than ± 0.5 mm (at distance of 190 mm)
- Linearity of a direction oblique to paper transport direction:
  less than ± 1.2 mm (at distance of 269 mm)
- Magnification in the direction of Paper Transport:
  less than 100% ± 0.5% (at distance of 234 mm)
- Magnification in the direction vertical to paper transport direction:
  less than 100% ± 0.5% (at distance of 190 mm)

Reference ***The above-described stipulations are in the case of using Letter size paper. The stipulations vary proportionately according to the measured length of the paper size except for the magnifications.***

8.12 Options

8.12.1 Factory Options

The eleven options which are factory-installed according to the specifications are as follows:

- Low Toner Sensor function

  This is a function of detecting that the toner level in the EP CARTRIDGE is low, using SENSOR TONER.
- Low Paper Sensor function

  This is a function of detecting that the paper in the paper cassette is low, using PAPER LOW SENSOR.
- 220V Power Supply
- 120V Power Cord
- 1200dpi(Dual laser beam)
- Keyed Toner Cartridge(customer unique)
- Automatic paper size Sensor(150 Input Tray)
- 550 Sheet Universal Paper Input Tray
- Multi-national Packaging

8.12.2 User-Installed Options

The four options that the user can install are as follows:

- ♦ Option 550 Paper Feeder (with Option 550 Paper Cassette)

  This is the same as the paper tray installed in the machine body. This can hold about 550 sheets of standard paper.
- ♦ Option Duplex

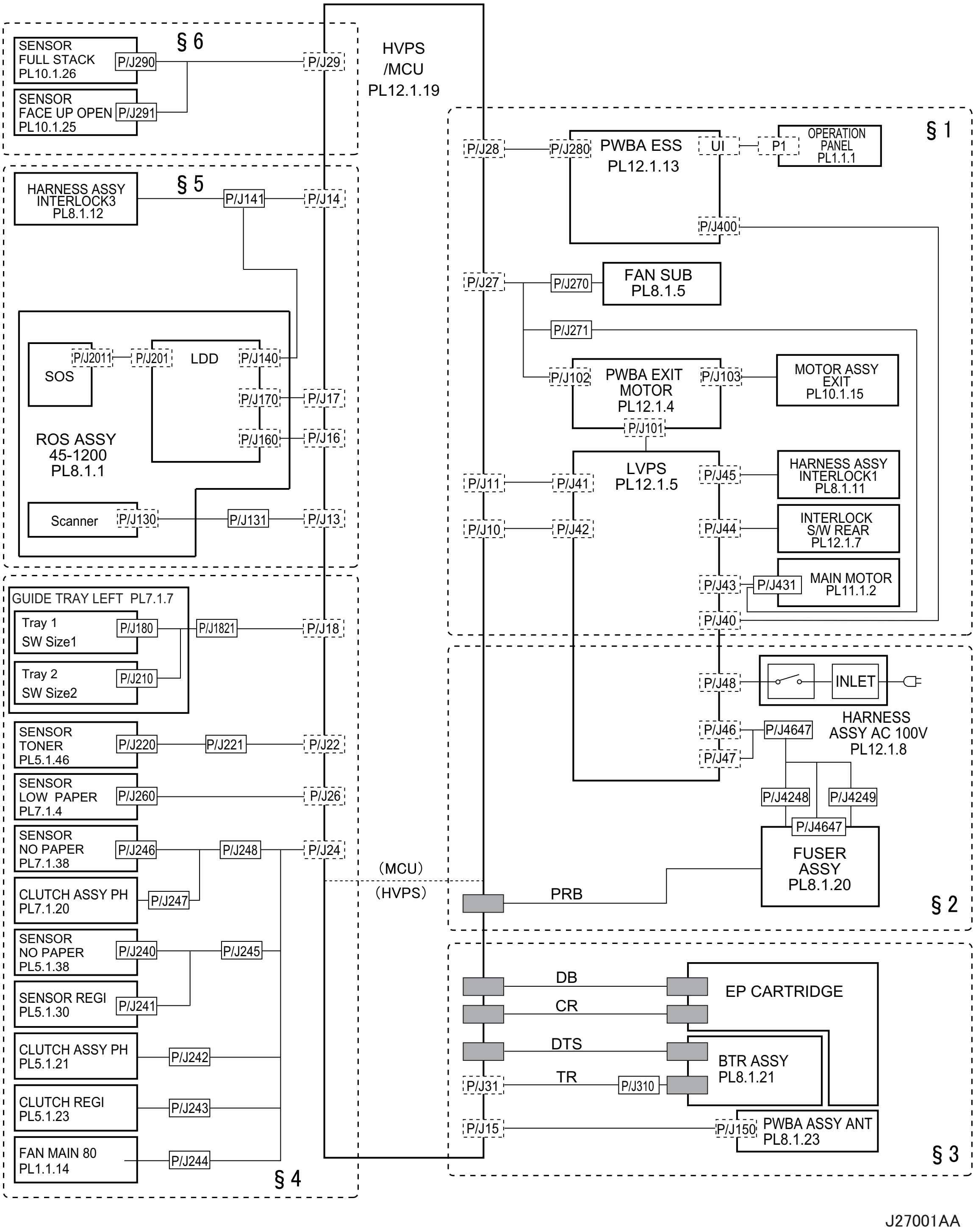
  This is a transport mechanism that can be added on to the machine to perform duplex printing by inverting the paper.
- ♦ Option OCT

  This is a paper output unit that can be added on to the machine to shift the paper output position at every desired number of prints.
- ♦ Option Face Up Tray

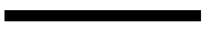
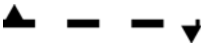
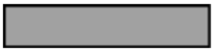
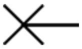
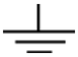
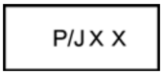
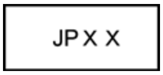
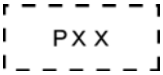
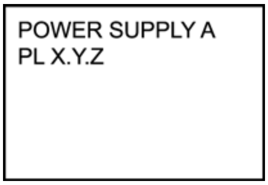
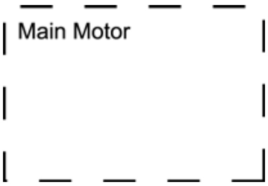
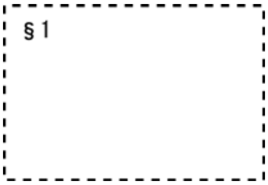
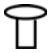
  This is a tray that is added on to the machine to receive the output paper with the printed surface upward.

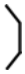
9. Connection Wiring Diagram

9.1 General Connection Wiring Diagram


§ 6
SENSOR FULL STACK PL10.1.26
P/J290
SENSOR FACE UP OPEN PL10.1.25
P/J291
P/J29
HVPS /MCU PL12.1.19
§ 5
HARNESS ASSY INTERLOCK3 PL8.1.12
P/J141
P/J14
SOS
P/J2011
P/J201
LDD
P/J140
P/J170
P/J17
P/J160
P/J16
ROS ASSY 45-1200 PL8.1.1
Scanner
P/J130
P/J131
P/J13
GUIDE TRAY LEFT PL7.1.7
Tray 1 SW Size1
P/J180
P/J1821
P/J18
Tray 2 SW Size2
P/J210
SENSOR TONER PL5.1.46
P/J220
P/J221
P/J22
SENSOR LOW PAPER PL7.1.4
P/J260
P/J26
SENSOR NO PAPER PL7.1.38
P/J246
P/J248
P/J24
CLUTCH ASSY PH PL7.1.20
P/J247
SENSOR NO PAPER PL5.1.38
P/J240
P/J245
SENSOR REGI PL5.1.30
P/J241
CLUTCH ASSY PH PL5.1.21
P/J242
CLUTCH REGI PL5.1.23
P/J243
FAN MAIN 80 PL1.1.14
P/J244
§ 4
(MCU)
(HVPS)
§ 1
P/J28
P/J280
PWBA ESS PL12.1.13
UI
P1
OPERATION PANEL PL1.1.1
P/J400
P/J27
P/J270
FAN SUB PL8.1.5
P/J271
P/J102
PWBA EXIT MOTOR PL12.1.4
P/J103
MOTOR ASSY EXIT PL10.1.15
P/J101
P/J11
P/J41
LVPS PL12.1.5
P/J45
HARNESS ASSY INTERLOCK1 PL8.1.11
P/J10
P/J42
P/J44
INTERLOCK S/W REAR PL12.1.7
P/J43
P/J431
MAIN MOTOR PL11.1.2
P/J40
P/J48
INLET
P/J46
P/J4647
HARNESS ASSY AC 100V PL12.1.8
P/J47
P/J4248
P/J4249
P/J4647
FUSER ASSY PL8.1.20
PRB
§ 2
DB
CR
EP CARTRIDGE
DTS
BTR ASSY PL8.1.21
TR
P/J31
P/J310
P/J15
P/J150
PWBA ASSY ANT PL8.1.23
§ 3
J27001AA

symbols in the general connection wiring diagram

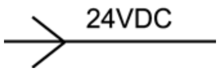
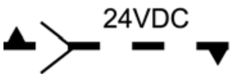
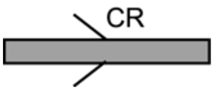
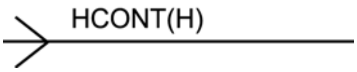
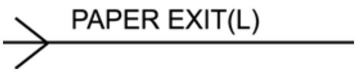
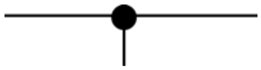
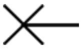
Symbol	Description
	Represents an interconnection between parts using wiring harness or wire.
	Represents an interconnection which differs according to the specifications.
	Represents an interconnection between parts using a conductive member such as a plate spring.
	Represents a connection between parts by tightening of a screw.
	Indicates a frame ground.
	Represents a connector. The connector No. is indicated inside the box.
	Represents a connection terminal with a plate spring on the printed circuit board. The connector (terminal) No. is indicated inside the box.
	Represents a connector directly connected to the printed circuit board. The connector No. is indicated inside the box.
	The box containing a part name represents a part. "PL X.Y.Z" indicates the item "Z" of the plate (PL) "X.Y" described in Chapter 5 "Parts List."
	Represents a functional part within a part, and indicates the name of the functional part.
	Represents a section in "2. Interconnection Wiring Diagram of Parts," and indicates its section No.
	Represents a screw for fixing wiring harness and a conductive member such as a plate spring.

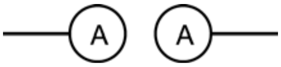
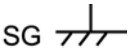
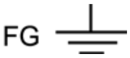
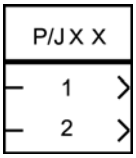
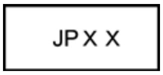
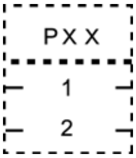
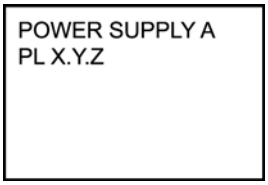
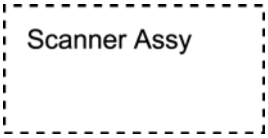
Symbol	Description
	Represents a conductive member such as a plate spring.

9.2 Interconnection Wiring Diagram of Parts

9.2.1 Instructions for the Use of the Interconnection Wiring Diagram of Parts

The symbols in the interconnection wiring diagram of parts are described below.
Note that the description of general symbols is omitted.

Symbol	Description
	Represents an interconnection between parts using wiring harness or wire, and indicates its signal name/contents. The arrow “>” or “<“on the line represents the direction of the signal.
	Represents an interconnection between parts using wiring harness or wire, which differs according to the specifications, and indicates its signal name/contents. The arrow “>” or “<“on the line represents the direction of the signal.
	Represents a interconnection between parts using a conductive member such as a plate spring, and indicates its signal name/contents. The arrow “>” or “<“on the line represents the direction of the signal.
	Represents a function and a logical value (High (H) or Low (L)) of a signal when the function is activated. The voltage indicates a value when the signal is High. The arrow indicates the direction of the signal.
	Represents a function and a logical value (High (H) or Low (L)) of a signal when the function is in a detectable state. The voltage indicates a value when the signal is High. The arrow indicates the direction of the signal.
	Represents a connection between lead wires.
	Represents a connection between parts by tightening of a screw.

Symbol	Description
	Represents a connection between “A” and “A”.
24VDC	The DC voltage indicates an approximate value measured when the negative side is connected to a signal ground (SG).
	Indicates a signal ground (SG).
	Indicates a frame ground (FG).
RTN	Indicates a return.
	Represents a connector. The connector and PIN Nos. are shown at the upper and lower parts respectively. “P,-” indicates the plug side of the connector. “J,>” indicates the jack side of the connector.
	Represents a connection terminal with a plate spring on the printed circuit board. The connector No. is indicated inside the box.
	Represents a connector directly connected to the printed circuit board. The connector No. is indicated inside the box.
	Represents a part. “PL X.Y.Z” indicates the item “Z” of the plate (PL) “X.Y” described in Chapter 5 “Parts List.”
	Represents a functional part within a part, and indicates the name of the functional part.

Symbol	Description
◆	Indicates a reference item associated with the section.

9.3 Configuration of the Interconnection Wiring Diagram of Parts

The interconnection wiring diagram is divided into 6 sections. § 1 to § 6 indicate details of the interconnections of parts.

§ 1 >HARNESS ASSY INTERLOCK1, INTERLOCK S/W REAR, MAIN MOTOR 45, FAN SUB, MOTOR ASSY EXIT

Connections of HARNESS ASSY INTERLOCK1 and INTERLOCK S/W REAR with LVPS
Connections of MAIN MOTOR 45 with LVPS
Connections of FAN SUB with HVPS/MCU
Connections of MOTOR ASSY EXIT with PWBA EXIT MOTOR
Connections of HVPS/MCU with LVPS, PWBA EXIT MOTOR and PWBA ESS

§ 2 > FUSER ASSY, POWER SWITCH

Connections of FUSER ASSY with LVPS and GUIDE ASSY CRU R
Connections of POWER SWITCH with LVPS

§ 3 > EP Cartridge, HOUSING ASSY BTR

Connections of EP Cartridge with GUIDE ASSY CRU R
Connections of HOUSING ASSY BTR with GUIDE ASSY CRU R
Connections of PWBA ASSY ANT with HVPS/MCU
Connections of GUIDE ASSY CRU R with HVPS/MCU

§ 4 > 150 Paper Feeder, 550 Paper Feeder, FAN MAIN 80

Connections of GUIDE TRAY LEFT with HVPS/MCU
Connections of NO PAPER SENSOR with HVPS/MCU
Connections of SENSOR REGI with HVPS/MCU
Connections of CLUTCH ASSY PH with HVPS/MCU
Connections of CLUTCH REGI with HVPS/MCU
Connections of PAPER LOW SENSOR with HVPS/MCU
Connections of NO PAPER SENSOR with HVPS/MCU
Connections of CLUTCH ASSY PH with HVPS/MCU
Connections of FAN MAIN 80 with HVPS/MCU
Connections of SENSOR TONER with HVPS/MCU

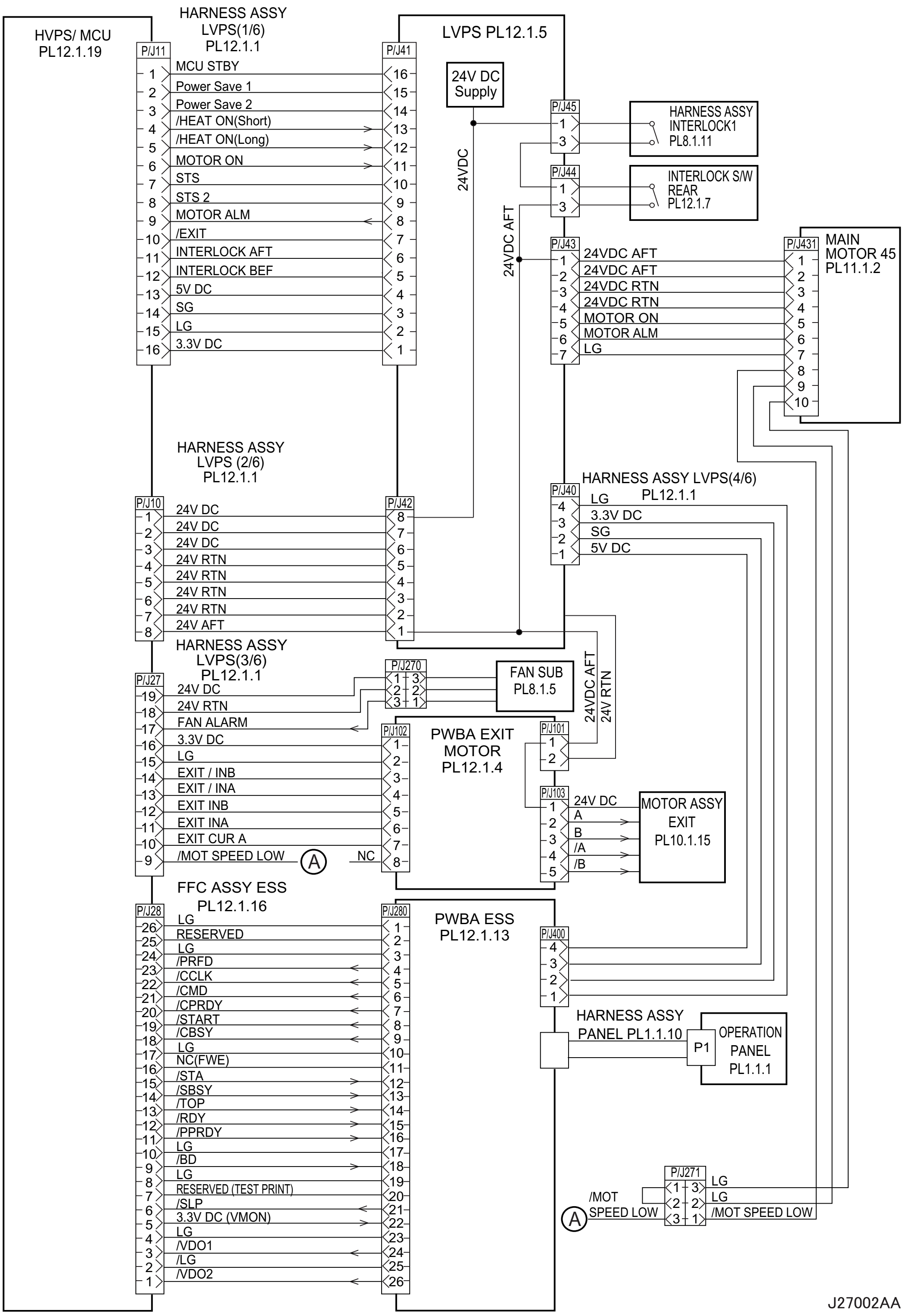
§ 5 > ROS ASSY 45-1200, HARNESS ASSY INTERLOCK3

Connections of ROS ASSY 45-1200 with HVPS/MCU
Connections of HARNESS ASSY INTERLOCK3 with HVPS/MCU

§ 6 > 500 Paper Exit

Connections of HVPS/MCU with SENSOR FACE UP OPEN
Connections of HVPS/MCU with SENSOR FULL STACK

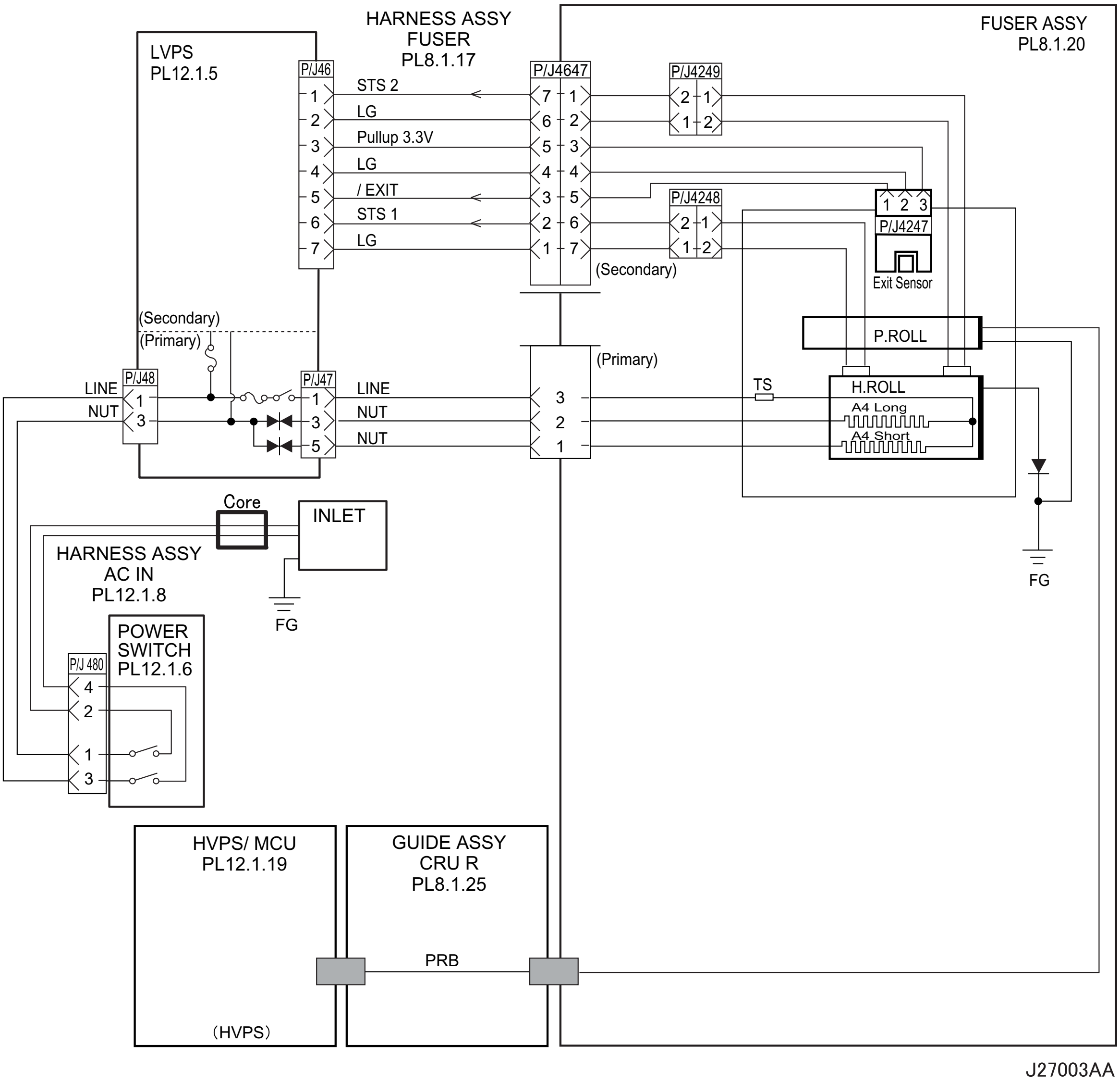
9.3.1 § 1> Harness ASSY, Interlock S/W Rear, Main Motor, Fan SUB, Motor ASSY Exit


HVPS/ MCU
PL12.1.19
HARNESS ASSY
LVPS(1/6)
PL12.1.1
P/J11
P/J41
MCU STBY
Power Save 1
Power Save 2
/HEAT ON(Short)
/HEAT ON(Long)
MOTOR ON
STS
STS 2
MOTOR ALM
/EXIT
INTERLOCK AFT
INTERLOCK BEF
5V DC
SG
LG
3.3V DC
LVPS PL12.1.5
24V DC
Supply
24VDC
24VDC AFT
P/J45
HARNESS ASSY
INTERLOCK1
PL8.1.11
P/J44
INTERLOCK S/W
REAR
PL12.1.7
P/J43
24VDC AFT
24VDC AFT
24VDC RTN
24VDC RTN
MOTOR ON
MOTOR ALM
LG
P/J431
MAIN
MOTOR 45
PL11.1.2
HARNESS ASSY
LVPS (2/6)
PL12.1.1
P/J10
P/J42
24V DC
24V DC
24V DC
24V RTN
24V RTN
24V RTN
24V RTN
24V AFT
HARNESS ASSY LVPS(4/6)
PL12.1.1
P/J40
LG
3.3V DC
SG
5V DC
HARNESS ASSY
LVPS(3/6)
PL12.1.1
P/J27
24V DC
24V RTN
FAN ALARM
3.3V DC
LG
EXIT / INB
EXIT / INA
EXIT INB
EXIT INA
EXIT CUR A
/MOT SPEED LOW
A
NC
P/J270
FAN SUB
PL8.1.5
24VDC AFT
24V RTN
P/J102
PWBA EXIT
MOTOR
PL12.1.4
P/J101
P/J103
24V DC
A
B
/A
/B
MOTOR ASSY
EXIT
PL10.1.15
FFC ASSY ESS
PL12.1.16
P/J28
P/J280
LG
RESERVED
LG
/PRFD
/CCLK
/CMD
/CPRDY
/START
/CBSY
LG
NC(FWE)
/STA
/SBSY
/TOP
/RDY
/PPRDY
LG
/BD
LG
RESERVED (TEST PRINT)
/SLP
3.3V DC (VMON)
LG
/VDO1
/LG
/VDO2
PWBA ESS
PL12.1.13
P/J400
HARNESS ASSY
PANEL PL1.1.10
P1
OPERATION
PANEL
PL1.1.1
P/J271
A
/MOT
SPEED LOW
LG
LG
/MOT SPEED LOW
J27002AA

Signal line name	Description
/HEAT ON	AC power-supply control signal for Heater Rod. Low: ON/High: OFF
MOTOR ON	Control signal for MAIN MOTOR 45.
MOTOR ALM	Monitor signal for MAIN MOTOR 45.
INTERLOCK AFT	Signal indicating that the rear cover is open. This signal goes High when the front or rear cover is open.
INTERLOCK BEF	Signal indicating that the front cover is open. This signal goes High when the front cover is open.
FAN ALARM	FUN SUB monitor signal. If a trouble occurs, this signal goes High.
EXIT /INB	Excitation signal for EXIT MOTOR. Phase /B.
EXIT /INA	Excitation signal for EXIT MOTOR. Phase /A.
EXIT INB	Excitation signal for EXIT MOTOR. Phase B.
EXIT INA	Excitation signal for EXIT MOTOR. Phase A.
EXIT CUR A	Current-switching signal for EXIT MOTOR.
/MOT SPEED LOW	Half-speed signal for MAIN MOTOR.
A and B	Current output to each winding of EXIT MOTOR. Phases A and B.
/A and /B	Current output to each winding of EXIT MOTOR. Phases $\overline{A}$ and $\overline{B}$.
/PRFD	Pre feed signal. This is effective only when /RDY is Low.
/CCLK	Clock signal. This is sent out simultaneously with /STA or /CMD.
/CMD	Command signal. When /CBSY is Low, it is sent out from the controller in synchronism with /CCLK.
/CPRDY	Ready signal for the controller power supply. This signal goes Low when the controller power supply is ON and, at the same time, initialization of the CPU is completed. When a trouble occurs with the CPU, the signal goes High.
/START	Print start signal. This is effective only when /RDY is Low.
/CBSY	Command busy signal. This goes Low when /CMD is sent out (except when /SBSY is Low or /PPRDY is High).
/STA	Status signal. Status is sent in synchronism with /CCLK when /SBSY is Low.
/SBSY	Status busy signal. This signal is Low when the printer is sending /STA (except when /CBSY is Low or /CPRDY is High).
/TOP	Vertical sync signal for image data. This is periodically sent out when ROS MOTOR is in operation.
/RDY	Ready signal. This signal is Low in a standby state where reception of /START is awaited.
/PPRDY	Ready signal for the printer power supply. This goes Low when the printer power supply is turned on and initialization of the CPU is completed. This signal goes High when the MCP detects an error.
/BD	Horizontal sync signal for image data. This is periodically sent out when ROS MOTOR is in operation.
/SLP	Control signal for LVPS. This goes Low in power saving mode.

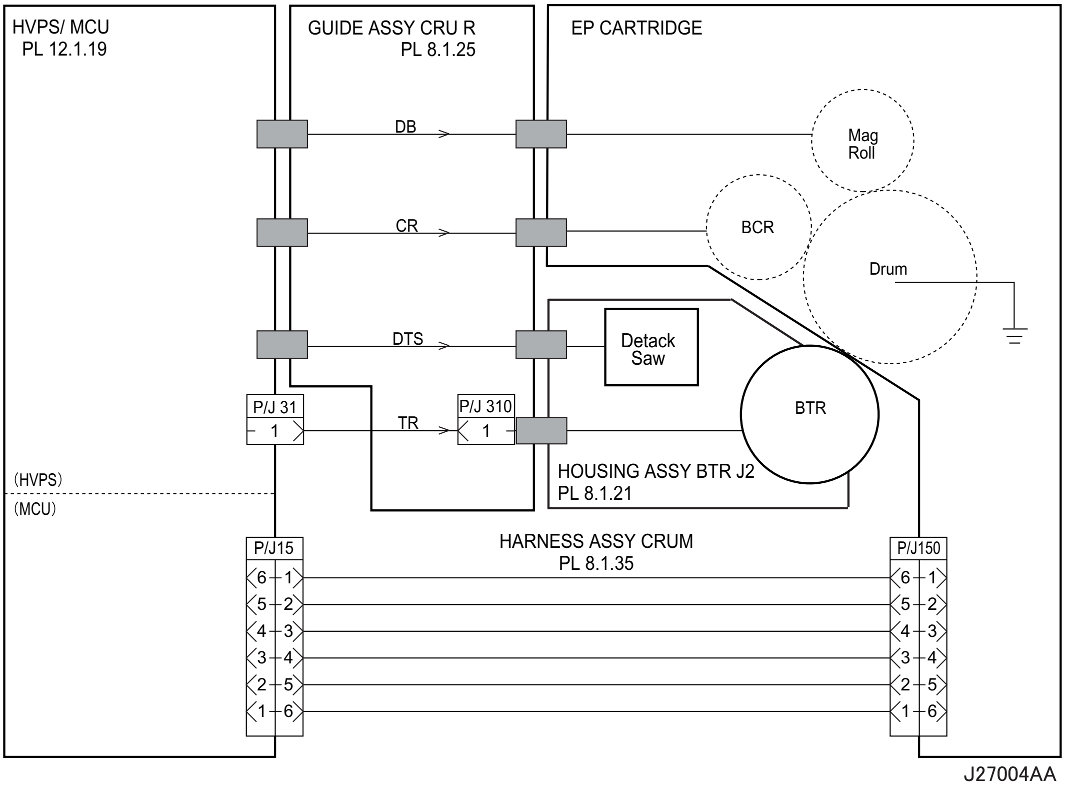
Signal line name	Description
/VDO1	Image data signal. This is sent out in synchronism with /TOP and /BD. This signal goes High (White) for other than effective data.
/VDO2	

9.3.2 § 2 > Fuser ASSY, Power Switch


HARNESS ASSY
FUSER
PL8.1.17
FUSER ASSY
PL8.1.20
LVPS
PL12.1.5
P/J46
P/J4647
P/J4249
STS 2
LG
Pullup 3.3V
LG
/ EXIT
STS 1
LG
P/J4248
1 2 3
P/J4247
Exit Sensor
(Secondary)
(Secondary)
(Primary)
P.ROLL
(Primary)
P/J48
P/J47
LINE
NUT
LINE
NUT
NUT
TS
H.ROLL
A4 Long
A4 Short
Core
INLET
HARNESS ASSY
AC IN
PL12.1.8
FG
FG
POWER
SWITCH
PL12.1.6
P/J 480
HVPS/ MCU
PL12.1.19
(HVPS)
GUIDE ASSY
CRU R
PL8.1.25
PRB
J27003AA

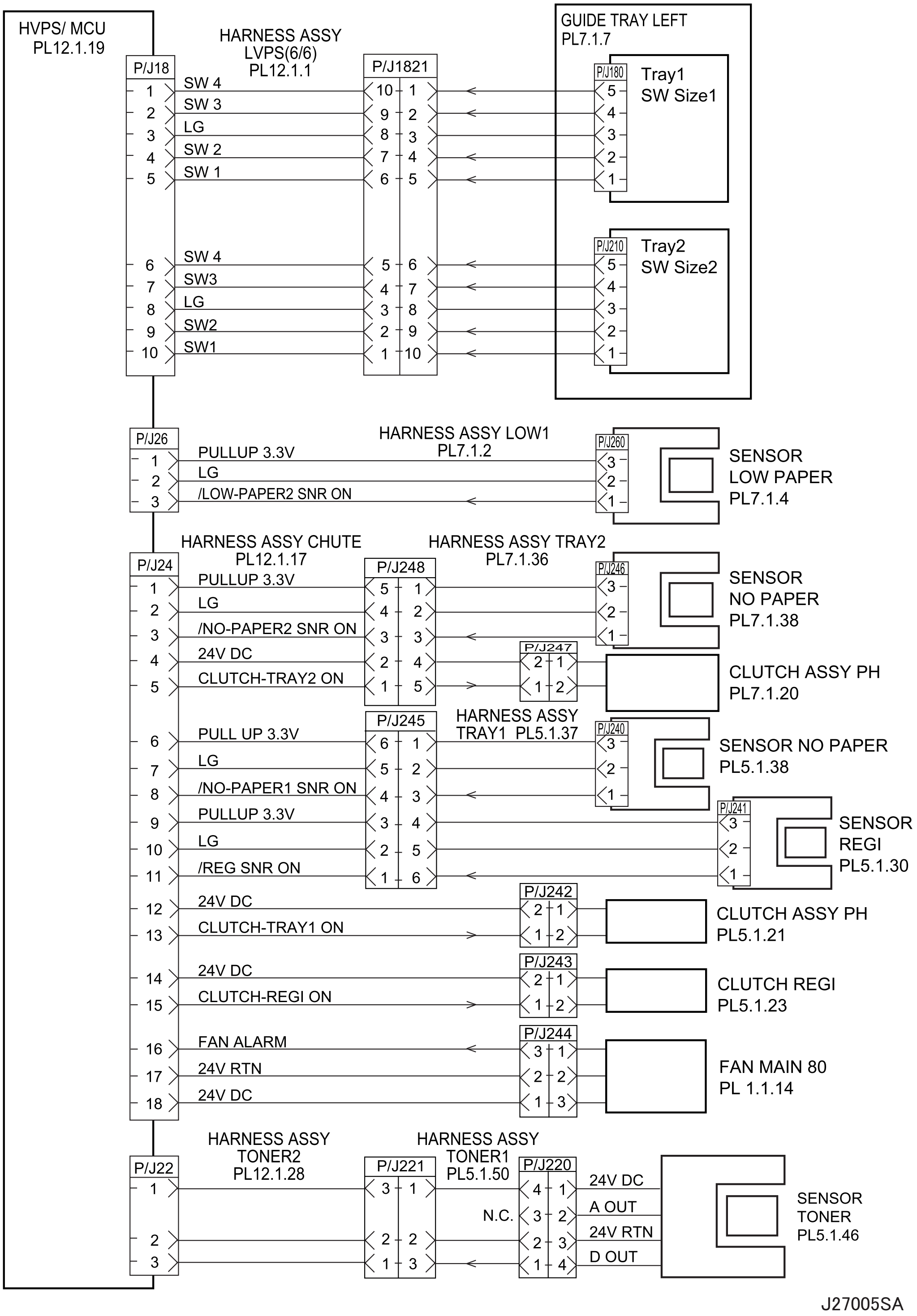
Signal line name	Description
/EXIT	Signal from Exit Sensor. This signal goes Low when light is received.
STS	Temperature monitor signal (analog signal) from Temperature Sensor (Thermistor). It detects the temperature on the surface of Heat Roll.
PRB	Output from HVPS which applies a high voltage to Pressure Roll.

9.3.3 § 3 > EP Cartridge, Housing ASSY BTR


HVPS/ MCU
PL 12.1.19
GUIDE ASSY CRU R
PL 8.1.25
EP CARTRIDGE
DB
CR
DTS
TR
Mag Roll
BCR
Drum
Detack Saw
BTR
P/J 31
P/J 310
1
(HVPS)
(MCU)
HOUSING ASSY BTR J2
PL 8.1.21
HARNESS ASSY CRUM
PL 8.1.35
P/J15
P/J150
6 1
5 2
4 3
3 4
2 5
1 6
J27004AA

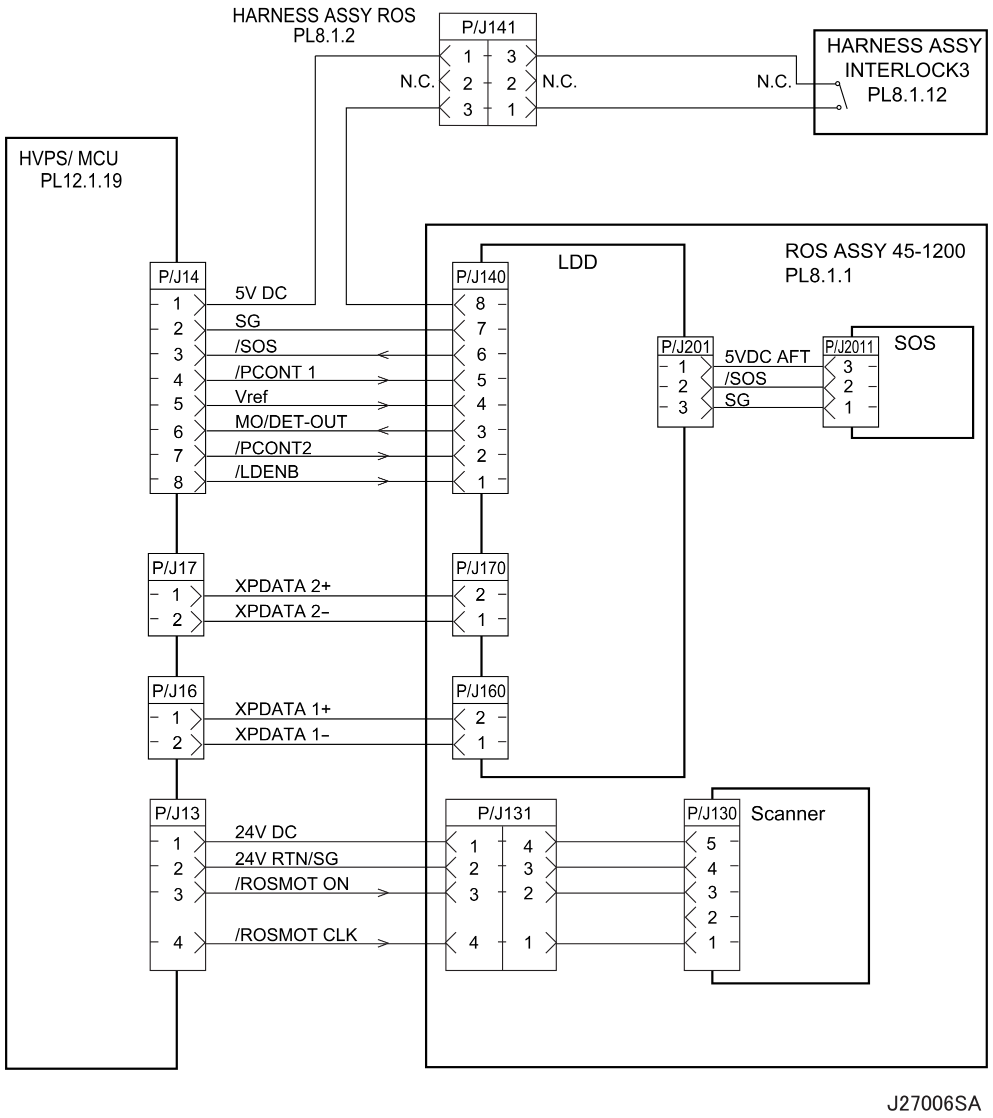
Signal line name	Description
DB	Output from HVPS to Mag Roll (Development bias)
CR	Output from HVPS to BCR
DTS	Output from HVPS to Detack Saw
TR	Output from HVPS to BTR

9.3.4 § 4 > 150 Paper Feeder, 550 Paper Feeder, FAN MAIN 80


HVPS/ MCU
PL12.1.19
HARNESS ASSY
LVPS(6/6)
PL12.1.1
GUIDE TRAY LEFT
PL7.1.7
P/J18
P/J1821
P/J180
Tray1
SW Size1
SW 4
SW 3
LG
SW 2
SW 1
P/J210
Tray2
SW Size2
SW 4
SW3
LG
SW2
SW1
P/J26
HARNESS ASSY LOW1
PL7.1.2
P/J260
PULLUP 3.3V
LG
/LOW-PAPER2 SNR ON
SENSOR
LOW PAPER
PL7.1.4
HARNESS ASSY CHUTE
PL12.1.17
HARNESS ASSY TRAY2
PL7.1.36
P/J24
P/J248
P/J246
PULLUP 3.3V
LG
/NO-PAPER2 SNR ON
24V DC
CLUTCH-TRAY2 ON
SENSOR
NO PAPER
PL7.1.38
P/J247
CLUTCH ASSY PH
PL7.1.20
P/J245
HARNESS ASSY
TRAY1 PL5.1.37
P/J240
PULL UP 3.3V
LG
/NO-PAPER1 SNR ON
PULLUP 3.3V
LG
/REG SNR ON
SENSOR NO PAPER
PL5.1.38
P/J241
SENSOR
REGI
PL5.1.30
P/J242
24V DC
CLUTCH-TRAY1 ON
CLUTCH ASSY PH
PL5.1.21
P/J243
24V DC
CLUTCH-REGI ON
CLUTCH REGI
PL5.1.23
P/J244
FAN ALARM
24V RTN
24V DC
FAN MAIN 80
PL 1.1.14
P/J22
HARNESS ASSY
TONER2
PL12.1.28
HARNESS ASSY
TONER1
PL5.1.50
P/J221
P/J220
N.C.
24V DC
A OUT
24V RTN
D OUT
SENSOR
TONER
PL5.1.46
J27005SA

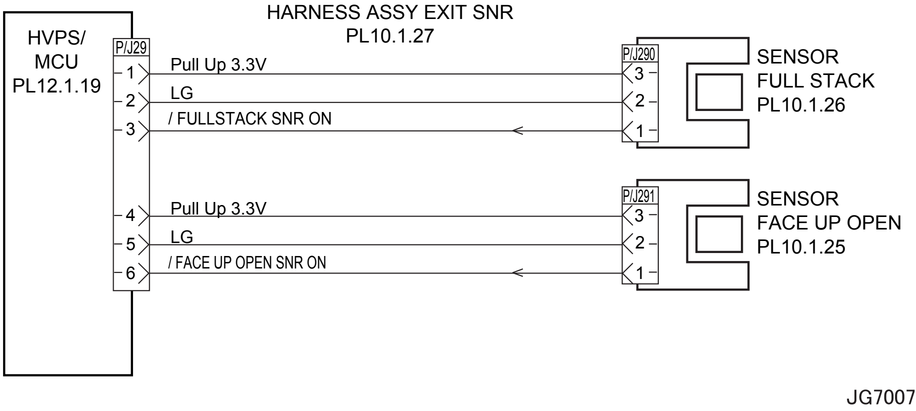
Signal line name	Description
/LOW-PAPER2 SNR ON	Signal from PAPER LOW SENSOR. This signal goes Low when light is received.
/NO-PAPER2 SNR ON	Signal from NO PAPER SENSOR of Tray2. This signal goes Low when light is received.
CLUTCH-TRAY2 ON	Control signal for CLUTCH ASSY PH of Tray2. Low: ON / High: OFF
/NO-PAPER1 SNR ON	Signal from NO PAPER SENSOR of Tray1. This signal goes Low when light is received.
/REG SNR ON	Signal from SENSOR REGI. This signal goes Low when light is received.
CLUTCH-TRAY1 ON	Control signal for CLUTCH ASSY PH of Tray1. Low: ON / High: OFF
CLUTCH-REGI ON	Control signal for CLUTCH REGI. Low: ON / High: OFF
FAN ALARM	Fan monitor signal. This signal goes High if there is a trouble with FAN MAIN 80.
D OUT	Signal indicating detection of toner in the EP cartridge, from SENSOR TONER.

9.3.5 § 5 > ROS ASSY, Interlock S/W, Harness ASSY Interlock3


HARNESS ASSY ROS
PL8.1.2
P/J141
N.C.
N.C.
N.C.
HARNESS ASSY
INTERLOCK3
PL8.1.12
HVPS/ MCU
PL12.1.19
P/J14
5V DC
SG
/SOS
/PCONT 1
Vref
MO/DET-OUT
/PCONT2
/LDENB
P/J140
LDD
ROS ASSY 45-1200
PL8.1.1
P/J201
5VDC AFT
/SOS
SG
P/J2011
SOS
P/J17
XPDATA 2+
XPDATA 2–
P/J170
P/J16
XPDATA 1+
XPDATA 1–
P/J160
P/J13
24V DC
24V RTN/SG
/ROSMOT ON
/ROSMOT CLK
P/J131
P/J130
Scanner
J27006SA

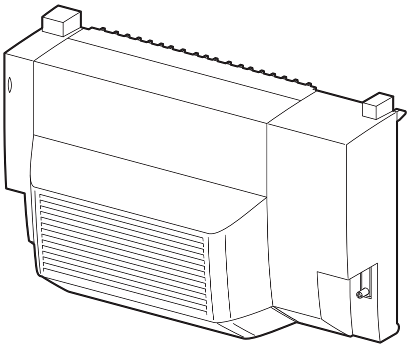
Signal line name	Description
/SOS	SYNC signal generated by SOS Sensor. This signal commands start of each scan.
/PCONT	Sample / Hold circuit Low: Sampled (LD is forcibly lit up); High: Held
Vref	Laser output control signal for determining or adjusting the current flowing through Laser Diode.
MO/DET-OUT	Laser output monitor signal for providing feedback of laser output beam from Laser Diode (analog signal).
/LDENB	Control signal permitting emission of Laser Diode. High: Laser Diode OFF.
XP DATA+	Print image data. DATA+ > DATA-: lit up DATA+ < DATA-: put out
XP DATA-	
/ROSMOT ON	Sensor Motor Control signal for turning ON/OFF Scanner Motor. Low: ON / High: OFF
/ROSMOT CLK	Clock signal to ROS Motor.

9.3.6 § 6 > 500 Paper Exit


HARNESS ASSY EXIT SNR
PL10.1.27
HVPS/
MCU
PL12.1.19
P/J29
1
2
3
4
5
6
Pull Up 3.3V
LG
/ FULLSTACK SNR ON
Pull Up 3.3V
LG
/ FACE UP OPEN SNR ON
P/J290
3
2
1
P/J291
3
2
1
SENSOR
FULL STACK
PL10.1.26
SENSOR
FACE UP OPEN
PL10.1.25
JG7007AA

Signal line name	Description
/FULLSTACK SNR ON	Signal from SENSOR FULL STACK. This signal goes Low when light is received.
/FACE UP OPEN SNR ON	Signal from SENSOR FACE UP OPEN. This signal goes Low when light is received.

Oki B7x0
Laser Printer
Option Duplex Technical Manual



Version 1.0

Marks giving caution

Maintenance operations requiring special cautions or additional information to descriptions of this manual are presented as "Warning", "Caution", or "Note", according to their nature.

WARNING

If instructions are not observed, death or serious injury may be caused.

CAUTION

If instructions are not observed, injuries of workers or physical damages to assets (including this laser printer) may result.

NOTE

Particularly important essentials for procedures, steps, rules, and others.

Safety

To prevent possible accidents during maintenance operation, you should observe strictly the "Warning" and "Caution" information in this manual.

Dangerous operations and operations out of range of this manual should be absolutely avoided.

Generally various processes not covered by this manual may be required in actual operation, which should be performed carefully always giving attention to safety.

Power source

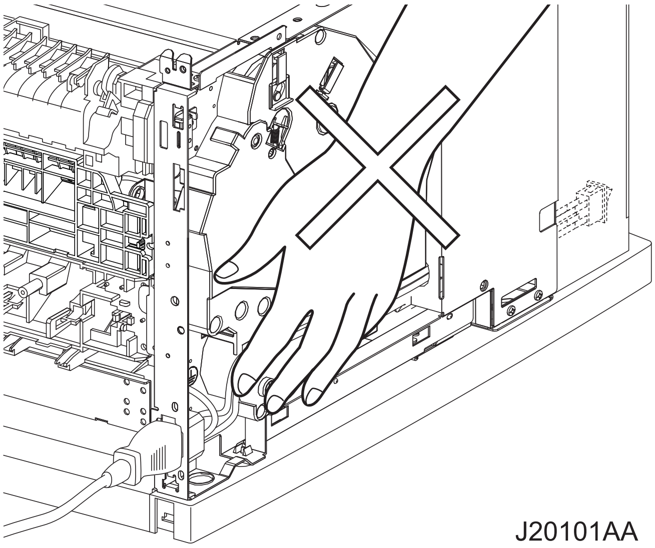
Keep the power supply off of the printer connected with this unit during maintenance operation to prevent electric shock, burns and other damages. Keep the power plug disconnected during the maintenance operation.

If the power supply should be kept connected for measurement of voltage or other similar reasons, sufficient care should be given to prevent electric shock, by following the procedures of this manual.

WARNING ***While the printer connected with this unit is ON, never touch live parts if not required absolutely.***

WARNING ***Power is supplied to the power switch / inlet (LVPS ASSY) even while the printer connected with this unit is off. Never touch its live components.***

WARNING ***Do not touch live parts of the printer connected with this unit unless otherwise specified.***



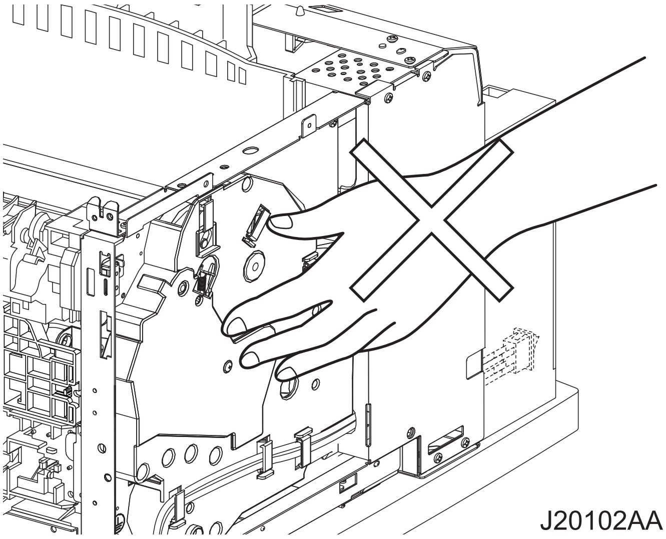
J20101AA

Driving units

When servicing gears or other driving units of the printer connected with this unit, be sure to turn them OFF and plug off. Drive them manually when required.

WARNING

Never touch the gears or other driving units while the printer is running.



Instalaserllation

Unpacking

CAUTION **The printer must be carried horizontally with two or more persons.**

CAUTION **Extreme care must be taken to avoid personal injuries.**

Unpacking Option Duplex

Unpack the carton, and confirm that the number of the Option Duplex and the attachments, and their appearances have no problem.

1) Option Duplex main unit

Installation Procedures

Installing laser printer

For details, refer to the Instruction Manual supplied with the main unit.

CAUTION **When holding up the laser printer, be sure to grasp the handles with both hands. Grasping a part other than the handles result in fall or damage of the laser printer.**

CAUTION When lifting the laser printer, bend your knees thoroughly to prevent lower back strain.

CAUTION The protection sheets and the fixing materials, which are removed before the installation, are re-used when the laser printer is moved to another place. Be sure to keep them.

1) Unpack the laser printer, and place it in an installation location after removing cushioning materials.
2) Confirm the attachments.
3) Peel off fixing tapes applied to the laser printer.
4) Unpack the EP CARTRIDGE, then be sure to shake it seven to eight times holding both sides.

NOTE **When removing the toner seal, draw it out straight and horizontally. After the removal, be careful not to shake or give a shock to the EP CARTRIDGE.**

5) Open the COVER OPEN, and install the EP CARTRIDGE.
6) Close the COVER OPEN.
7) Draw the paper tray, and press down the PLATE ASSY BTM to lock.
8) Place papers into the paper tray.

NOTE **When placing papers into the paper tray, be careful for the followings:**
- Align four corners of papers to place.
- Adjust the paper guide to the paper size.
- Do not place papers over the capacity or over the upper-limit line of the paper tray.

9) Push the paper tray into the laser printer to install.
10) Connect the power cord.
11) Turn on the power switch of the laser printer.
12) Try some test printings with each paper-feed trays to confirm that there is no problem.

Installing Option Duplex

For details, refer to the Instruction Manual supplied with the main unit or Chapter 3 RRP 21.1 Option Duplex.

CAUTION **Before the installation, turn off the power and plug off the power cord.**

1) Unpack the Option Duplex, remove cushioning materials, and confirm the attachments.
2) Remove the COVER DUP and CONNECTOR COVER on rear of the laser printer.

NOTE **Keep the removed COVER DUP and CONNECTOR COVER carefully.**

3) Fit the hooks on the lower part of the Option Duplex with the holes on the rear of the laser printer to install.
4) Tighten the screws (two) on the lower part of the Option Duplex to fix securely.
5) Connect the power cord.
6) Turn on the power switch of the laser printer.
7) Try some test duplex-printings to confirm that there is no problem.

Dismantlement

Dismantlement procedures

Dismantling laser printer and option units

For details, refer to the Instruction Manual or Chapter 3 Removal and Replacement Procedures.

Perform the dismantlement in the reverse procedures of the installation.

CAUTION **When holding up the laser printer, be sure to grasp the handles with both hands. Grasping a part other than the handles may result in a fall or damage to the laser printer.**

CAUTION **When lifting the laser printer, bend your knees thoroughly to prevent lower back strain.**

NOTE **Be sure to remove the EP CARTRIDGE from the laser printer and put it into a plastic bag to dismantle.**

NOTE **Be sure to re-use the protection sheets and fixing materials, which are removed at the installation.**

NOTE **Be sure to use the cushioning materials properly.**

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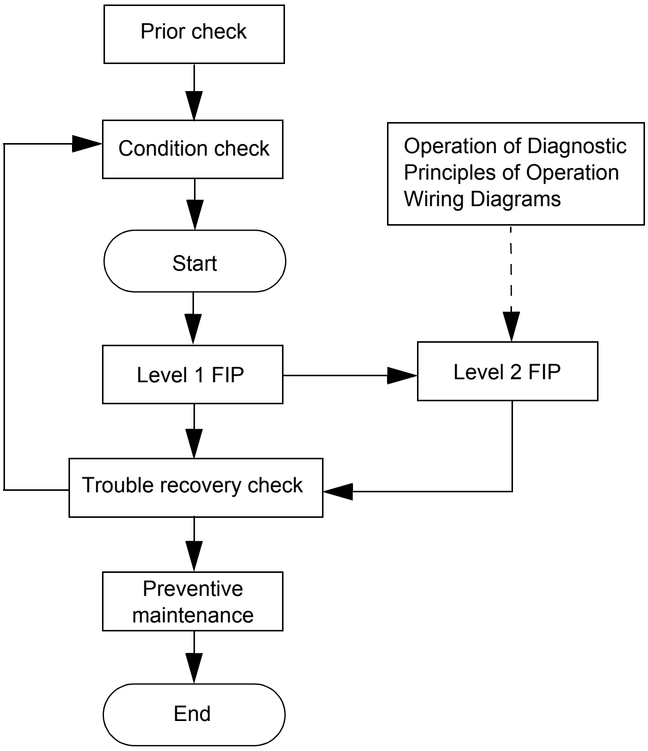
1. Troubleshooting

1.1 Progressing with the Troubleshooting

After making sure of actual condition of a trouble, proceed with the troubleshooting process efficiently making use of the Fault Isolation Procedure (FIP), Operation of Diagnostic (Chapter 2), Wiring Diagrams (Chapter 7), and Principles of Operation (Chapter 6).

1.1.1 Flow of Troubleshooting

Flow of the troubleshooting is as follows:


Prior check
Condition check
Start
Operation of Diagnostic
Principles of Operation
Wiring Diagrams
Level 1 FIP
Level 2 FIP
Trouble recovery check
Preventive maintenance
End

1.1.2 Preparatory Requirements

Be sure to check the following items before starting the troubleshooting procedures:

1) Voltage of the power supply is within the specifications (measure the voltage at the electric outlet).

2) Power cord is free from breakage, short-circuit, disconnected wire, or incorrect connection in the power cord.

3) The laser printer is properly grounded.

4) The laser printer is not installed at a place subjected to too high temperature, too high humidity, too low temperature, too low humidity or rapid change of temperature.

5) The laser printer is not installed close to water service, humidifier, heat generating unit, or fire, in very dusty place, or a place exposed to air flow from the air conditioning system.

6) The laser printer is not installed in a place where volatile gas or inflammable gas is generated.

7) The laser printer is not installed under direct sunbeams.

8) The laser printer is installed in a well-ventilated place.

9) The laser printer is installed on a stout and stable plane.

10) Paper used meets specifications (standard paper is recommendable).

11) The laser printer is handled properly.

12) Parts which should be periodically replaced are replaced each time when specified number of sheets have been printed.

1.1.3 Cautions for Service Operations

1) Be sure to remove the power cord except when it is specifically required.

WARNING

If the printer is kept ON, never touch the conductive parts while it is not specifically required.
The power switch and inlet of LVPS is live even while the power supply is cut off. Never touch the live parts.

2) When checking some parts with covers of the printer removed and with the interlock and safety and power switches ON, remove the connector (P/J140) on the ROS ASSY except when it is specifically required.

WARNING

When checking some parts with covers of the printer removed and with the interlock and safety and power switches ON, laser beams may be irradiated from the ROS ASSY. Since it is dangerous, be sure to remove the connector (P/J140) while it is not required.

3) When using Diagnostic. tools or other tools of high voltage, be sure to keep them covered except when otherwise specified.

WARNING

When using Diagnostic Tool or other tools of high voltage, never touch parts of high voltage.
When using Diagnostic Tool or other tools of high voltage, be sure to follow the procedure of this manual.

4) Workers should wear a wrist band or the like to remove static electricity from their body, grounding their body while working.

1.1.4 Cautions for FIP Use

1) It is assumed in the FIP that the printer controller (ESS Controller) is functioning normally. If any trouble cannot be corrected by troubleshooting, replace the printer controller with a normal one and check for proper operation again.
   If the trouble is not still corrected, replace the major parts and then related parts in succession and confirm according to the procedure of the “Check”.

2) When troubleshooting according to the FIP, normal HVPS/MCU, LVPS, FUSER ASSY, BTR ASSY and so no of the printer may be necessary for isolation of failed parts. Prepare them in advance.

3) In the initial check according to the FIP, check only items which can be simply checked.

4) In the initial check according to the FIP, check the constitutive parts of the major check parts and related parts, as well as major check parts.

5) When working with the printer, be sure to remove the power cord except when required specifically. Never touch live parts if not required, while the power cord is connected.

6) Connector condition is denoted as follows:
   [P/J12] → Connector (P/J12) is connected.
   [P12] → Plug side with the connector (P/J12) removed (except when attached directly to the board).
   [J12] → Jack side with the connector (P/J12) removed (except when attached directly to the board).

7) [P/J1-2PIN <=> P/J3-4PIN] in the FIP means measurement with the plus side of the measuring instrument connected to [2PIN] of [P/J1] and the minus side to [4PIN] of [P/J3].

8) [P/J1<=> P/J2] in the FIP means measurement for all terminals corresponding between [P/J1] and [P/J2] referring to “Wiring Diagrams”.

9) In [P/J1-2PIN <=> P/J3-4PIN] in the FIP where voltage is measured, [P/J3-4PIN] on the rear minus side is always at the AG (analog ground), SG (signal ground), or RTN (return).
   Therefore, after checking of proper continuity between AGs, SGs, or RTNs respectively, the rear minus side can be connected to the PIN of AG, SG or RTN instead of [P/J3-4PIN].
   However, care should be taken not to mistake since [AG], [SG], and [RTN] are not on the same level.

10) Measure the voltage of small connectors with the special tool. Handle the tool with care, as the leading edge of the tool is pointed.

11) When measuring the voltage, set the EP CARTRIDGE, BRT ASSY and paper tray, close the COVER TOP ASSY, FUSER ASSY, and COVER REAR and power ON if not required specifically.

12) Numerical values in the FIP are only for standard. If numerical values are approximate, they should be considered permissible.

13) Parts which are always removed to check as indicated in the FIP and procedures for that purpose are not specifically referred to here. They should be handled carefully.

14) “Replacement” in the FIP indicates replacement of parts which are considered to be the source of trouble to be checked after replacing those parts, assemblies containing them (HIGH ASSY).

15) The FIP describes the first tray on the lower part of the device as “Tray 1,” and the second tray as “Tray 2”, and the first tray of Option 550 Paper Feeder as “Tray 3”, and the second tray as “Tray 4”.

16) In the FIP, existence and non-existence of Diagnostic tools (maintenance tools) are distinguished in some cases. Correct troubles according to the instructions in the FIP.

17) In the FIP, procedures are differentiated depending on specifications. Correct troubles according to the instructions in the FIP.

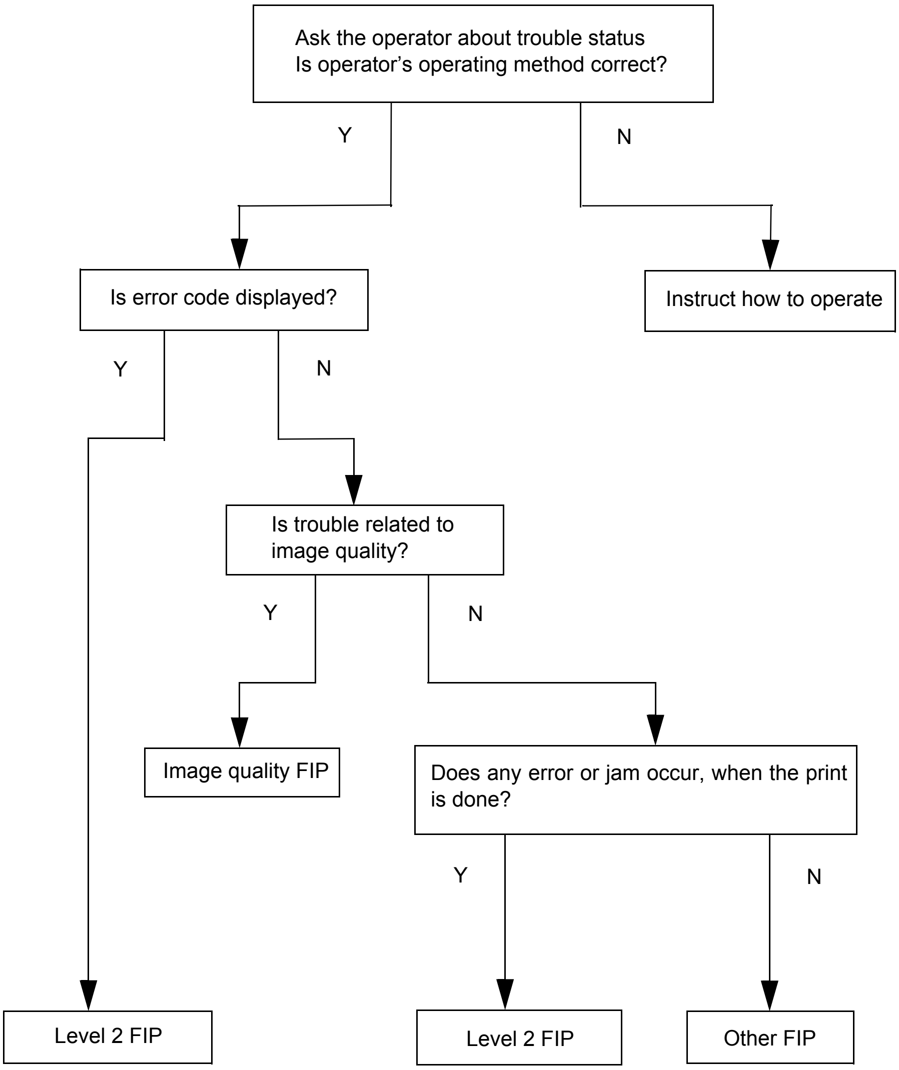
18) For the printer, some troubleshooting procedure may follow the manual of the printer, of which you should take note.
Keep the manual for the printer when required.

1.2 Level 1 FIP

1.2.1 Level 1 FIP

The level 1 FIP is the first step for trouble diagnosis. The level 1 FIP isolates the presence of various troubles including error codes, and the level 2 FIP provides a guide for proceeding of the troubleshooting.

1.2.2 Flow of Level 1 FIP


Ask the operator about trouble status
Is operator’s operating method correct?
Y
N
Is error code displayed?
Instruct how to operate
Y
N
Is trouble related to image quality?
Y
N
Image quality FIP
Does any error or jam occur, when the print is done?
Y
N
Level 2 FIP
Level 2 FIP
Other FIP

1.2.3 Error/Status Code List

Status Code	**Error Contents**	**Error Description**	**FIP to be referred**
STATUS 3-1	JS0	STATUS 3-1 to 3-5 indicates JAM by combination of Table 1-1.	
STATUS 3-2	JS1		
STATUS 3-3	JS2		
STATUS 3-4	JS3		
STATUS 3-5	JS4		
STATUS 17-3	Duplex Cover Open	- Cover of Option Duplex is open.	FIP1.26
STATUS 17-6	Duplex Unit Fail	- Option Duplex removed after powering on.	FIP1.27 FIP1.32
STATUS 21-1	Illegal Size (Duplex/OCT)	- Paper size that is not supported in Duplex or OCT mode is selected.	FIP1.31 FIP1.41 (Separate Volume)

Table 1-1

JS4	**JS3**	**JS2**	**JS1**	**JS0**	**Contents of Jam**	**Error Description**	**FIP to be referred**
0	0	1	0	0	Duplex Jam 1	Paper Jam/Dup to Regi - When the paper reached Regi position from Duplex Sensor earlier than the specified time.	FIP1.29
0	1	1	0	0	Duplex Jam 2	Paper Jam/Exit to Dup - When the paper did not reach Duplex Sensor within the specified time.	FIP1.28
1	0	1	0	0	Duplex Jam 3	Paper Jam/Dup to Regi - When the paper was not fed to Duplex Sensor within the specified time. - When Duplex Sensor turned ON in warming up.	FIP1.29
1	1	1	0	0	Duplex Jam 4 (Misfeed Jam)	Paper Jam/Misfeed - When the paper did not reach Regi position from Duplex Sensor within the specified time.	FIP1.30

1.3 Level 2 FIP

1.3.1 Level 2 FIP

The Level 2 FIP is the trouble diagnostic procedure to be sorted based on the symptoms of various troubles. In the troubleshooting, executing the steps given in the FIP or checking procedure allows you to find out a cause of trouble in a short time.

1.4 Error Code FIP

1.4.1 Level 1 FIP

FIP1.26 Option Duplex Cover Error

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) LVPS (PL12.1.5) HSG LOWER DUP (PL21.1.6) COVER HSG DUP (PL21.1.18) SWITCH DUPLEX (PL21.1.27) PWBA DUPLEX (PL21.1.32)		
1	Checking COVER HSG DUP Open COVER HSG DUP. Is the rib on HSG LOWER DUP to push down SWITCH DUPLEX damaged?	Replace HSG LOWER DUP. (RRP21.3)	With tool Go to step 2. Without tool Go to FIP2.30 SWITCH DUPLEX.
2	Checking SWITCH DUPLEX for function Remove EP CARTRIDGE. Does number of Sensor/Switch Check increase by one, every time COVER HSG DUP is opened and closed? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.30 SWITCH DUPLEX.

FIP1.27 Option Duplex Error

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) PWBA DUPLEX (PL21.1.32) HARNESS ASSY DUP (PL21.1.7)		
1	Checking Option Duplex installation Does Error still occur, after removing Option Duplex once, reinstalling, and then turning the power ON?	Go to FIP2.27 PWBA DUPLEX.	End of work

FIP1.28 Paper Jam/Exit to Dup

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) SENSOR DUP (PL21.1.34) ACTUATOR DUP (PL21.1.37) ROLL DUP (PL21.1.17) ROLL PINCH (PL21.1.4) MOTOR DUPLEX (PL21.1.29)		
1	Does Error occur, when the power is turned ON?	Go to step 2.	Go to step 4.
2	Checking the paper at ACTUATOR DUP Open COVER HSG DUP. Does the paper remain at ACTUATOR DUP?	Remove the paper, and go to step 3.	Go to FIP2.29 SENSOR DUP.
3	Does Error occur, when the power is turned ON?	Go to FIP2.29 SENSOR DUP.	Go to step 4.
4	Checking Option Duplex installation Remove Option Duplex, and then reinstall. Does Error occur, when Test Printing by Duplex printing?	Go to step 5.	End of work
5	Checking paper position (1) Open COVER HSG DUP. Does the front end of paper reach the top roller of ROLL DUP?	Go to step 6.	Replace FUSER ASSY. (RRP8.8)
6	Checking transmission of driving force Remove COVER LEFT (PL21.1.25). Do ROLL DUP and every Gear rotate smoothly? Turn the gear with a finger to check.	Go to step 7.	Replace the disturbing part of rotation.
7	Checking ROLL DUP and ROLL PINCH Open COVER HSG DUP and insert paper, and then close it. Is the paper transferred smoothly? Turn the upper GEAR ROLL (PL21.1.20) clockwise with a finger, and check paper transfer.	Go to step 8.	Replace the disturbing roll of transfer.
8	Checking MOTOR DUPLEX Does MOTOR DUPLEX rotate normally? Checks by Chapter 2 Diagnostic [Duplex Motor, Clockwise Normal Speed Test].	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.28 MOTOR DUPLEX.

FIP1.29 Paper Jam/Dup to Regi

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) FDR1 AS SUB 150 A4 (PL5.1.2) SENSOR DUP (PL21.1.34) ACTUATOR DUP (PL21.1.37) ROLL DUP (PL21.1.17) ROLL PINCH (PL21.1.4) MOTOR DUPLEX (PL21.1.29)		
1	Checking Option Duplex installation Remove Option Duplex, and then reinstall. Does Error still occur, when Test Printing is done by Duplex print?	Go to step 2.	End of work
2	Checking FDR1 AS SUB 150 A4 Is FDR1 AS SUB 150 A4 installed correctly?	Go to step 3.	Reinstall FDR1 AS SUB 150 A4 correctly.
3	Checking transmission of driving force Remove COVER LEFT (PL21.1.25). Do ROLL DUP and every Gear rotate smoothly? Turn the gear with a finger to check.	Go to step 4.	Replace the parts disturbing rotation.
4	Checking ROLL DUP and ROLL PINCH Open COVER HSG DUP and insert paper, and then close it. Do ROLL DUP and every Gear rotate smoothly? Turn the upper GEAR ROLL (PL21.1.20) clockwise with a finger, and check paper transfer.	Go to step 5.	Replace the parts disturbing transfer.
5	Checking MOTOR DUPLEX Does MOTOR DUPLEX rotate normally? Checks by Chapter 2 Diagnostic [Duplex Motor, Clockwise Normal Speed Test].	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.28 MOTOR DUPLEX.

FIP1.30 Paper Jam/Duplex Misfeed

Step	Check	Yes	No
	Possible causative parts: FDR1 AS SUB 150 A4 (PL5.1.2) HVPS/MCU (PL12.1.19) ROLL DUP (PL21.1.17) ROLL PINCH (PL21.1.4) MOTOR DUPLEX (PL21.1.29)		
1	Checking Option Duplex installation Remove Option Duplex, and then reinstall. Does Error occur, when Test Printing is done by Duplex print?	Go to step 2.	End of work
2	Checking FDR1 AS SUB 150 A4 Is FDR1 AS SUB 150 A4 installed correctly?	Go to step 3.	Reinstall FDR1 AS SUB 150 A4 correctly.
3	Checking transmission of driving force Remove COVER LEFT (PL21.1.25). Do ROLL DUP and every Gear rotate smoothly? Turn the gear with a finger to check.	Go to step 4.	Replace the parts disturbing rotation.
4	Checking ROLL DUP and ROLL PINCH Open COVER HSG DUP and insert paper, and then close it. Is the paper transferred smoothly? Turn the upper GEAR ROLL (PL21.1.20) clockwise with a finger to check paper transfer.	Go to step 5.	Replace the parts disturbing transfer.
5	Checking MOTOR DUPLEX Does MOTOR DUPLEX rotate normally? Checks by Chapter 2 Diagnostic [Duplex Motor, Clockwise Normal Speed Test].	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.28 MOTOR DUPLEX.

FIP1.31 Paper Size Error/Duplex

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) GUIDE TRAY LEFT (PL7.1.7) PWBA FEEDER 550 (PL20.1.34)		
1	Checking paper size Is the paper size capable for duplex printing?	Go to step 2.	Replace the paper.
2	Checking the paper size setup Does the paper size in use match the size set by GUIDE ASSY END?	Go to step 3.	Change the paper size setup.
3	Checking NVRAM data Does NV01 setup match the specification of printer?	Go to step 4.	Modify the memory data of NV01.
4	Checking the paper tray (1) Is it Tray 1 that is in use, when Error occurred?	Replace HVPS/MCU. (RRP12.10)	Go to step 5.
5	Checking the paper tray (2) Is it Tray 2 that is in use, when Error occurred?	Replace HVPS/MCU. (RRP12.10)	Go to step 6.
6	Checking the paper tray (3) Is it Tray 3 that is in use, when Error occurred?	Go to FIP2.20.21 PWBA FEEDER 550.	Go to step 7.
7	Checking the paper tray (4) Is it Tray 4 that is in use, when Error occurred?	Go to FIP2.20.21 PWBA FEEDER 550.	Replace HVPS/MCU. (RRP12.10)

FIP1.32 No Recognition of Option Duplex

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) HARNESS ASSY LVPS (PL12.1.1) PWBA DUPLEX (PL21.1.32) HARNESS ASSY DUP (PL21.1.7)		
1	Checking Option Duplex detection signal (1) Remove PWBA DUPLEX. (RRP21.5) Remove HARNESS ASSY DUP. Connect J2750 of HARNESS ASSY DUP to P2750 of HARNESS ASSY LVPS. Is the voltage across P2750-5 <=> J2750-6, 3.3VDC?	Go to step 4.	Go to step 2.
2	Checking Option Duplex detection signal (2) Is the voltage across P/J27-4 <=> P/J27-3 on HVPS/MCU, 3.3 VDC?	Go to step 3.	Replace HVPS/MCU. (RRP12.10)
3	Checking HARNESS ASSY LVPS for continuity Remove HARNESS ASSY LVPS. Is the following each continuous? J27-4 <=> J2750-5 J27-3 <=> J2750-6 J27-2 <=> J2750-7 J27-1 <=> J2750-8	Go to step 4.	Replace HARNESS ASSY LVPS.
4	Checking HARNESS ASSY DUP for continuity Disconnect connectors of HARNESS ASSY DUP. Is the following each continuous? J2750-3 <=> J50-8 J2750-4 <=> J50-7 J2750-5 <=> J50-6 J2750-6 <=> J50-5	Replace PWBA DUPLEX. (RRP21.5)	Replace HARNESS ASSY DUP.

1.4.2 Level 2 FIP

FIP2.27 PWBA DUPLEX (PL21.1.32)

Step	Check	Yes	No
	Possible causative parts: PWBA DUPLEX (PL21.1.32) HARNESS ASSY DUP (PL21.1.7) HVPS/MCU (PL12.1.19) HARNESS ASSY LVPS (PL12.1.1)		
1	Checking HARNESS ASSY DUP for continuity Remove Option Duplex. Disconnect P/J50 from PWBA DUPLEX. Is each cable between J2750 <=> J50 continuous normally?	Go to step 2.	Replace HARNESS ASSY DUP.
2	Checking HARNESS ASSY LVPS for continuity Disconnect P/J27 from HVPS/MCU. Is each cable between J27 <=> J2750 continuous normally?	Go to step 3.	Replace HARNESS ASSY LVPS.
3	Checking after replacing PWBA DUPLEX Replace PWBA DUPLEX. (RRP21.5) Is the problem cleared, after replacement?	End of work	Replace HVPS/MCU. (RRP12.10)

FIP2.28 MOTOR DUPLEX (PL21.1.29)

Step	Check	Yes	No
	Possible causative parts: MOTOR DUPLEX (PL21.1.29) PWBA DUPLEX (PL21.1.32) HARNESS ASSY DUP (PL21.1.7) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5) HARNESS ASSY LVPS (PL12.1.1)		
1	Checking HARNESS ASSY DUP for continuity Remove Option Duplex. Disconnect P/J50 from PWBA DUPLEX. Is each cable between J2750 <=> J50 continuous normally?	Go to step 2.	Replace HARNESS ASSY DUP.
2	Checking HARNESS ASSY LVPS for continuity Disconnect P/J27 from HVPS/MCU. Is each cable between J27 <=> J2750 continuous normally?	With tool Go to step 3. Without tool Go to step 4.	Replace HARNESS ASSY LVPS.
3	Checking MOTOR DUPLEX for rotation Does the motor rotate? Check by the rotating sound of the motor. Checks by Chapter 2 Diagnostic [Duplex Motor, Clockwise Normal Speed Test].	Replace HVPS/MCU. (RRP12.10)	Go to step 4.
4	Checking after replacing MOTOR DUPLEX Replace MOTOR DUPLEX. Is the problem cleared after replacing the MOTOR DUPLEX?	End of work	Go to step 5.
5	Checking the power to MOTOR DUPLEX Is the voltage across P/J27-8 <=> P/J27-7 on HVPS/MCU, 24 VDC?	Go to FIP2.22 PWBA DUPLEX.	Go to step 6.
6	Checking HVPS/MCU for continuity Disconnect P/J10 and P/J27 from HVPS/MCU. Is P10-1 <=> P27-8 continuous normally?	Go to FIP2.1 LVPS.	Replace HVPS/MCU. (RRP12.10)

FIP2.29 SENSOR DUP (PL21.1.34)

Step	Check	Yes	No
	Possible causative parts: SENSOR DUP (PL21.1.34) ACTUATOR DUP (PL21.1.37) HARNESS ASSY DUP SNR (PL21.1.35) PWBA DUPLEX (PL21.1.32) HARNESS ASSY DUP (PL21.1.7) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5) HARNESS ASSY LVPS (PL12.1.1)		
1	Checking ACTUATOR DUP for operation Does ACTUATOR DUP operate smoothly? Does the flag go into the sensor detecting area when there is no paper in the Option Duplex, and out of the detecting area when the paper is set?	With tool Go to step 2. Without tool Go to step 3.	Replace ACTUATOR DUP.
2	Checking SENSOR DUP (1) Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Open COVER HSG DUP (PL21.1.18) and keep open. Does the number increase one by one, every time ACTUATOR DUP operates? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to step 4.
3	Checking SENSOR DUP (2) Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Open COVER HSG DUP (PL21.1.18) and keep open. Is the voltage across P/J53-3 <=> P/J53-2, 0 VDC when ACTUATOR DUP is pushed, and 3.3 VDC when released?	Replace HVPS/MCU. (RRP12.10)	Go to step 4.
4	Checking SENSOR DUP (3) Replace SENSOR DUP. (RRP21.7) Does the problem still occur after replacement.	Go to step 5.	End of work
5	Checking HARNESS ASSY DUP SNR for continuity Remove SENSOR DUP. Disconnect P/J53 from PWBA DUPLEX. Is each cable between J53 <=> J530 continuous normally?	Go to step 6.	Replace HARNESS ASSY DUP SNR.
6	Checking HARNESS ASSY DUP for continuity Remove HARNESS ASSY DUP. Is J50 <=> J2750 continuous normally?	Go to step 7.	Replace HARNESS ASSY DUP.
7	Checking HARNESS ASSY LVPS for continuity Remove HARNESS ASSY LVPS. Is J27 <=> J2750 continuous normally?	Go to step 8.	Replace HARNESS ASSY LVPS.
8	Checking HVPS/MCU for continuity Disconnect P/J11 from HVPS/MCU. Is P11-16 <=> P27-4 continuous normally?	Go to FIP2.1 LVPS.	Replace HVPS/MCU. (RRP12.10)

FIP2.30 SWITCH DUPLEX (PL21.1.27)

Step	Check	Yes	No
	Possible causative parts: SWITCH DUPLEX (PL21.1.27) HARNESS ASSY LVPS (PL12.1.1) HARNESS ASSY DUP COVER (PL21.1.31) PWBA DUPLEX (PL21.1.32) HARNESS ASSY DUP (PL21.1.7) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5)		
1	Checking SWITCH DUPLEX for continuity Remove SWITCH DUPLEX. Is J520-2 <=> J520-1 continuous, when SWITCH DUPLEX is pushed, and cut when released?	Go to step 2.	Replace SWITCH DUPLEX. (RRP21.12)
2	Checking HARNESS ASSY DUP COVER for continuity Remove HARNESS ASSY DUP COVER. Is J52 <=> J520 continuous normally?	Go to step 3.	Replace HARNESS ASSY DUP COVER.
3	Checking HARNESS ASSY DUP for continuity Remove HARNESS ASSY DUP. Is J50 <=> J2750 continuous normally?	Go to step 4.	Replace HARNESS ASSY DUP.
4	Checking HARNESS ASSY LVPS for continuity Remove HARNESS ASSY LVPS. Is J27 <=> J2750 continuous normally?	Go to step 5.	Replace HARNESS ASSY LVPS.
5	Checking the voltage of SWITCH DUPLEX Remove EP Cartridge. Is the voltage across P/J27-4 <=> P/J27-3 on HVPS/MCU, 3.3 VDC?	Go to FIP2.27 PWBA DUPLEX.	Go to step 6.
6	Checking HVPS/MCU for continuity Disconnect P/J27 from HVPS/MCU. Is P27-4 <=> P11-16 continuous normally?	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.1 LVPS.

1.5 Preventive maintenance

When visiting the customer, perform the maintenance work other than the original purpose to avoid any trouble that may arise.

Procedure for preventive maintenance

1) Check how the customer is using the machine.
2) Write down the cumulative print count.

NOTE **Use the cumulative print count as a guide of replacing periodic replacement parts. Replace the periodic replacement parts as required.**

3) Print several piece of paper to check no problem.
4) Remove foreign articles on BTR ASSY, FUSER ASSY and paper transfer rolls, and clean stains with a brush and dry waste cloth.

NOTE **When stains is heavy, clean with dampened cloth, and then clean with dry cloth. Be careful not to damage the parts to be cleaned.**

5) Cleaning the fan exhaust
   Remove COVER REAR, and clean the dust on MAIN FAN with a brush.
   Remove COVER FRONT, and clean the dust on FAN SUB.

NOTE **The clogged exhaust and fan cause a temperature rise inside and failures.**

6) Print several piece of paper again to check no problem.

2. Diagnostics

2.1 Using Diagnostics

Please see the main Service Manual for description of using the printer’s built in diagnostic menu.

3. Removal and Replacement Procedures

Parts removal and replacement procedures of the Option Duplex is described here.

NOTE

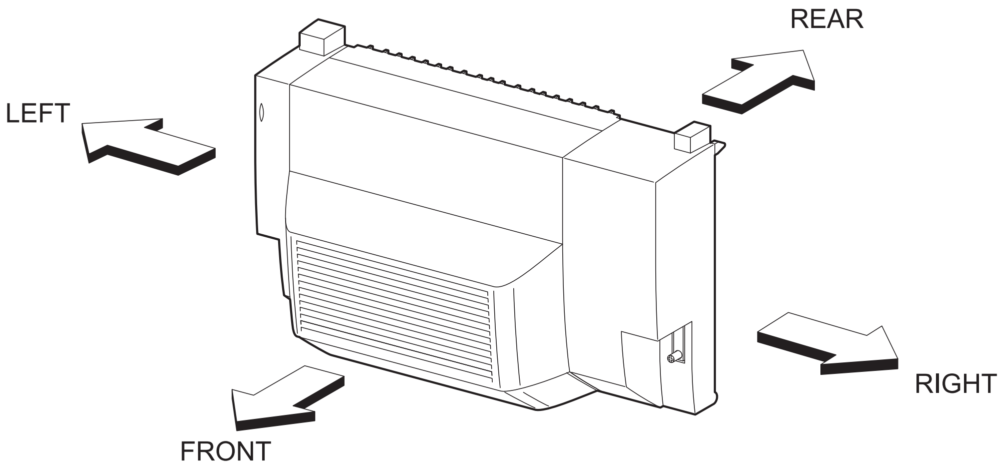
Parts are controlled as spare parts. When servicing for parts for which no procedures are described, observe their assembling condition before starting the service.

3.1 Before starting service work

- Turn the power OFF and remove the power cord from the electric outlet.
- Do not give forcible power to prevent damage of parts or functions.
- Since a wide variety of screws are used, be careful not to mistake their positions, to prevent crushing of the screw holes or other troubles.
- Wear a wrist band or the like as far as possible to remove static electricity of the human body.

3.2 Description of procedures

- "RRP X,Y "AAAAA" at the top of procedures represent the part name AAAAA are to be removed and replaced.
- "(PL X.Y.Z)" following the parts name in procedures represent that the parts are those of the plate (PL) "X.Y", item "Z" in Chapter 5, Parts List. Their forms, replacing position or other conditions can be seen in Chapter 5, Parts List.
- In the procedures, directions are represented as follows.
  - Front: Front when you are facing the front of this Option Duplex.
  - Rear: Inner direction when you are facing the front of this Option Duplex.
  - Left: Left hand when you are facing the front of this Option Duplex.
  - Right: Right hand when you are facing the front of this Option Duplex.

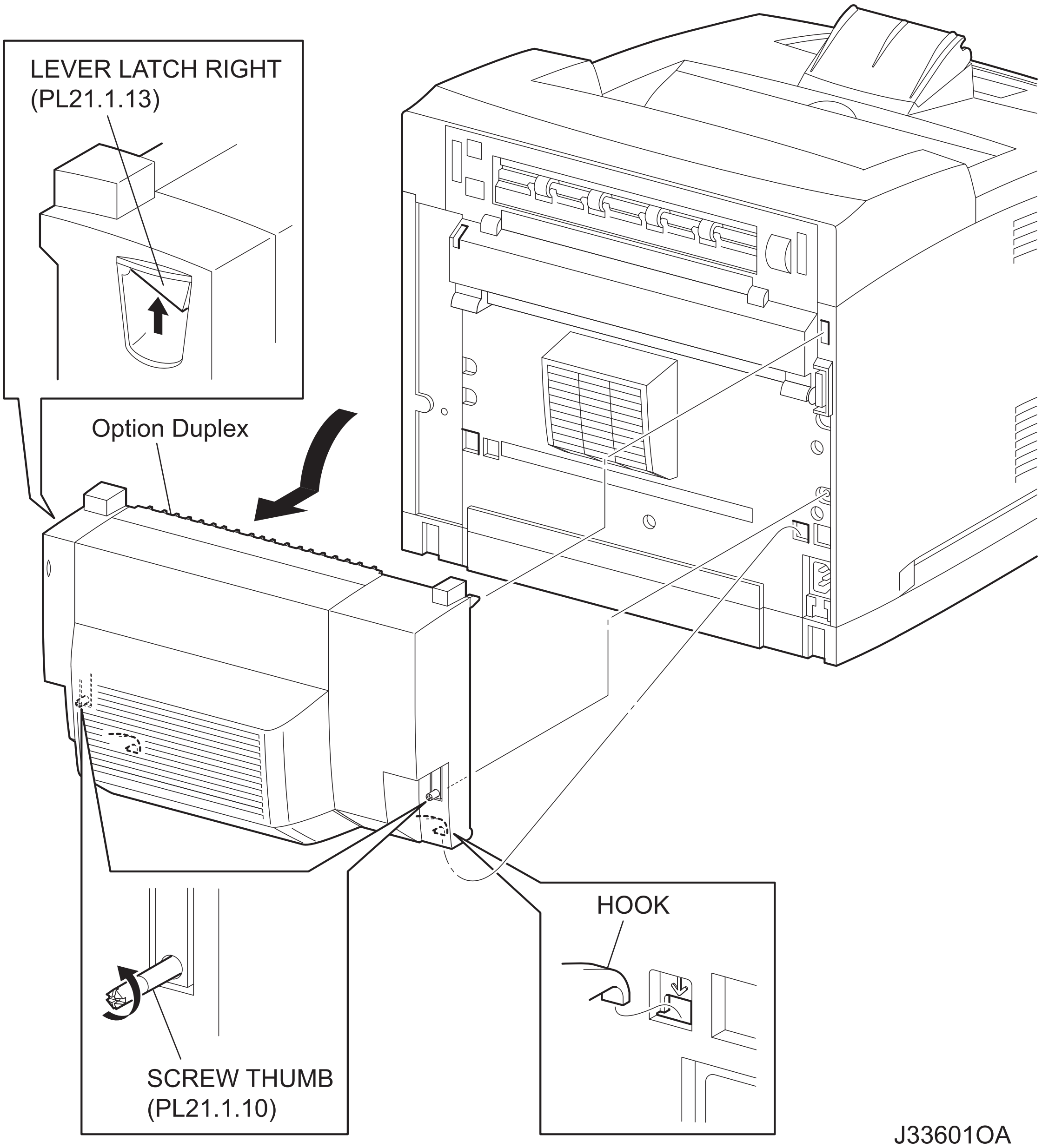


J23619AA

- The screws in procedures are expressed with their replacing position, color, characteristics and nominal length, etc.
- “In case of _____ specifications" in the procedures indicate that service operation should be provided only to Option Duplex of specified specifications (service operation should not be provided for Option Duplex of specifications not covered).
- "RRP X.Y" in the midst or at the end of sentences in the procedures indicate that work procedures related with the "RRP X.Y" are described.
- "Figure X.Y" at the end of the sentences of procedures indicate that illustrations instructive for the "RRP X.Y" are included.
- "Z)" in the illustrations correspond to "Z)" of the service procedures.
- The screws in the illustrations should be removed using a plus (+) screwdriver unless otherwise specified.
- A black arrow in the illustrations indicate movement in the arrow mark direction. Numbered black arrows indicate movement in the order of the numbers.
- White arrows (FRONT) in the illustrations indicate the front direction.
- For the positions of the connectors (P/J), refer to Chapter 7, Electric wiring.

RRP21.Option Duplex

RRP21.1 Option Duplex


LEVER LATCH RIGHT
(PL21.1.13)
Option Duplex
HOOK
SCREW THUMB
(PL21.1.10)
J33601OA

Removal

NOTE **When removing the Option Duplex, be careful not to drop the Option Duplex.**

1) Loosen the 2 SCREW THUMBs (PL21.1.10) securing the Option Duplex to the printer.
2) Push up the LEVER LATCH RIGHT (PL21.1.13), and release the hooks of the LEVER LATCH RIGHT and LEVER LATCH LEFT (PL21.1.15).
3) Put down the Option Duplex forward, disconnect the connector (P/J2750) of the HARNESS ASSY DUP (PL21.1.7) from the printer.
4) Remove 2 bosses on both sides of the HSG LOWER DUP (PL21.1.6).
5) Release the 2 bottom hooks of the HSG LOWER DUP, and remove the Option Duplex from the printer.

Replacement

NOTE **When installing the Option Duplex, be careful not to drop the Option Duplex.**

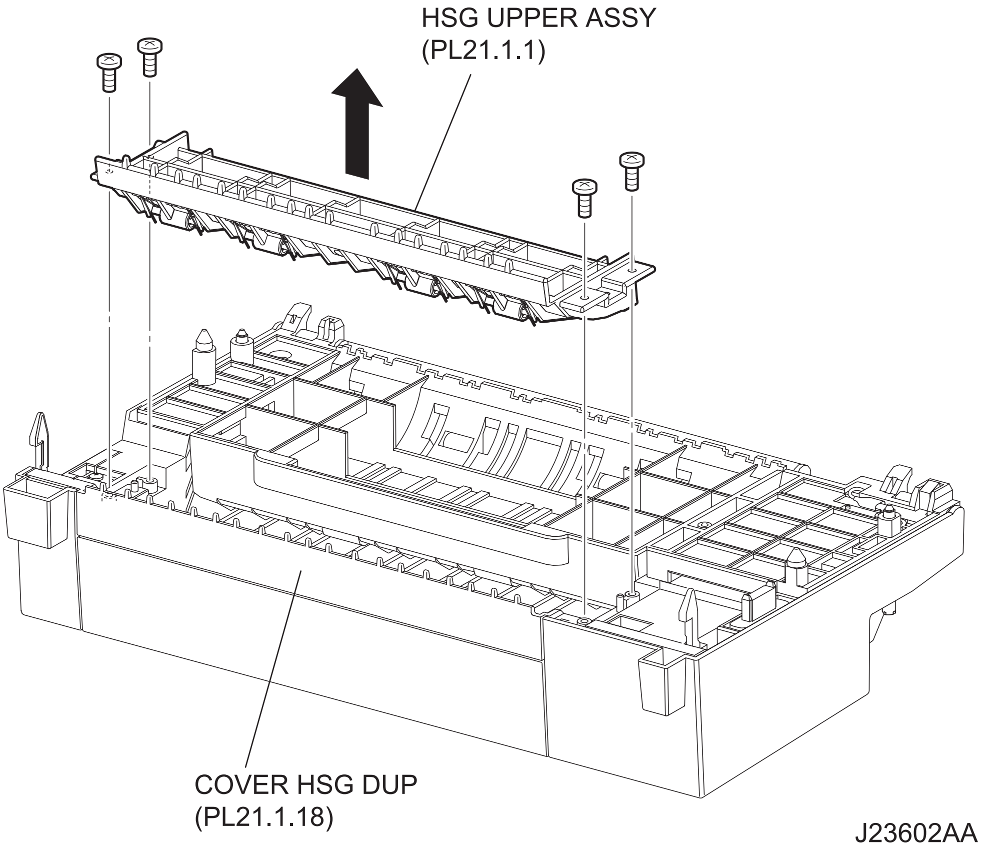
1) Insert the 2 bottom hooks of the HSG LOWER DUP (PL21.1.6) into the holes of the printer.

NOTE **When installing, be sure to install the bottom hooks of the Option Duplex into the holes of the printer.**

2) Push the Option Duplex to the printer, and connect the connector (P/J2750) of the HARNESS ASSY DUP (PL21.1.7) to the printer. At this time, the Option Duplex is locked to the printer with the LEVER LATCH RIGHT (PL21.1.13) and LEVER LATCH LEFT (PL21.1.15).
3) Secure the Option Duplex to the printer by tightening the 2 SCREW THUMBs (PL21.1.10).

NOTE **The SCREW THUMBs should be completely tightened to fasten the Option Duplex.**

RRP21.2 HSG UPPER ASSY (PL21.1.1)


HSG UPPER ASSY
(PL21.1.1)
COVER HSG DUP
(PL21.1.18)
J23602AA

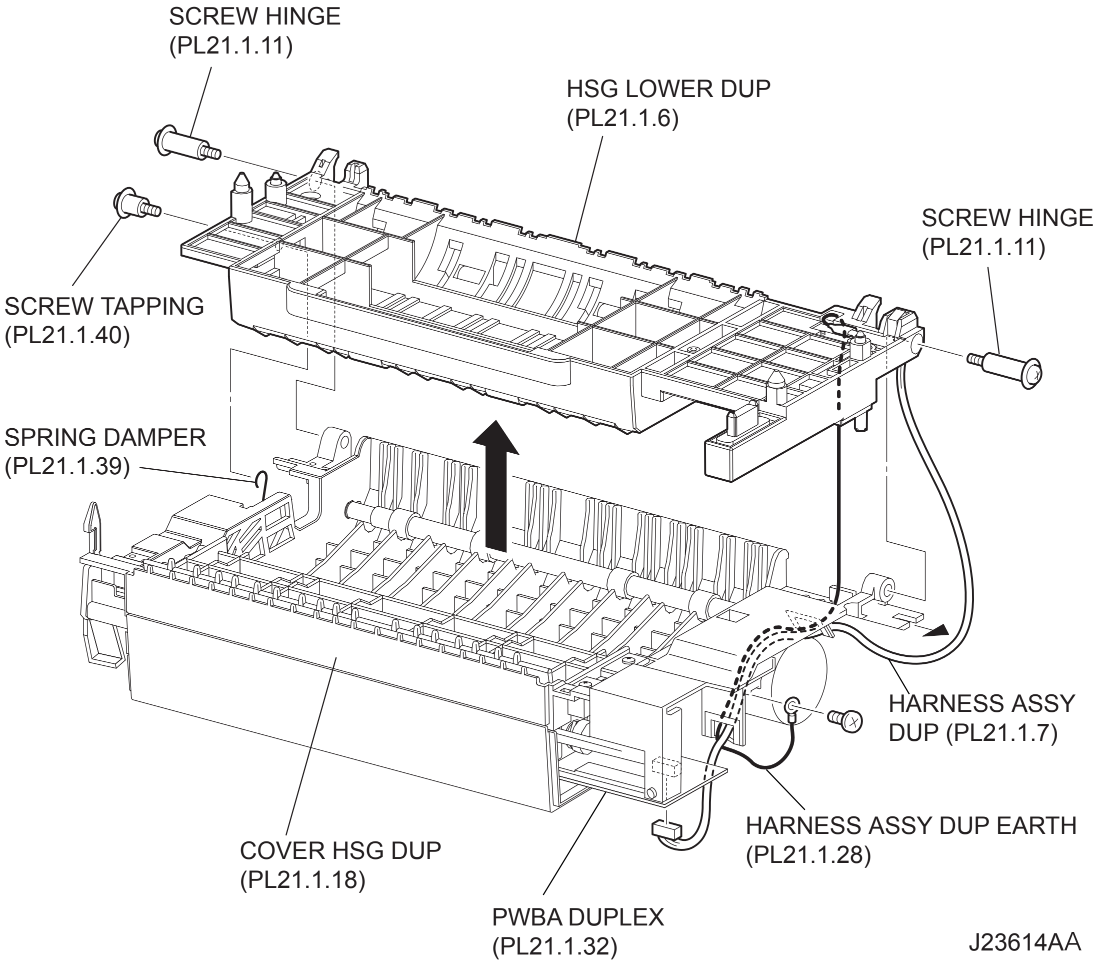
Removal

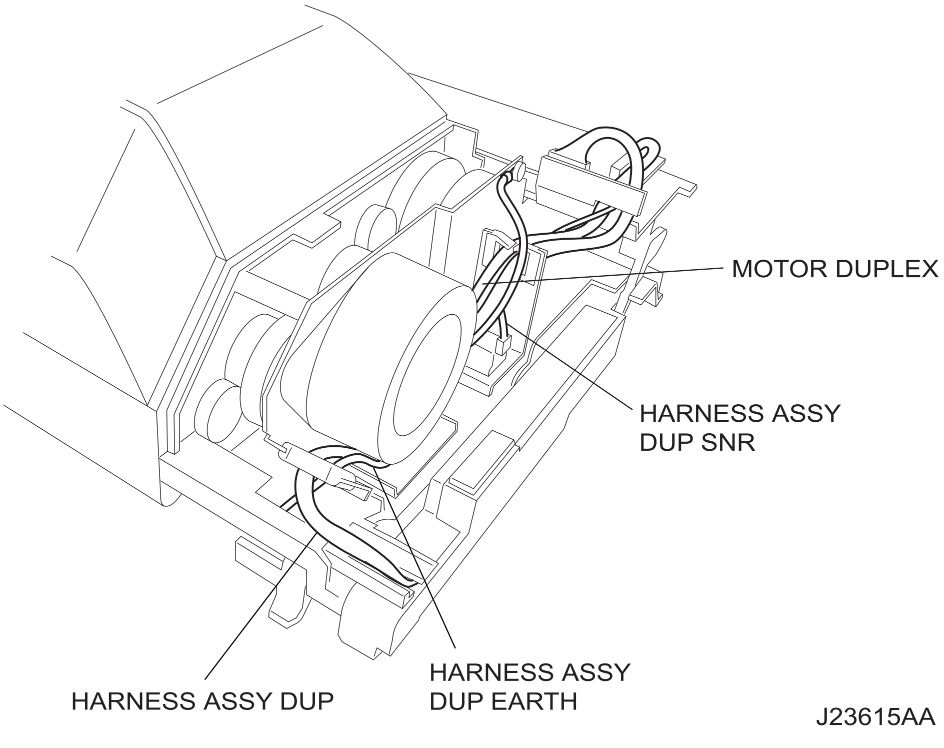
1) Remove the 4 screws (gold tapping, 8mm) securing the HSG UPPER ASSY to the Option Duplex.
2) Remove the HSG UPPER ASSY from the COVER HSG DUP (PL21.1.18).

Replacement

1) Install the HSG UPPER ASSY to the COVER HSG DUP (PL21.1.18) using the 4 screws (gold tapping, 8mm).

RRP21.3   HSG LOWER DUP (PL21.1.6)


SCREW HINGE
(PL21.1.11)
HSG LOWER DUP
(PL21.1.6)
SCREW HINGE
(PL21.1.11)
SCREW TAPPING
(PL21.1.40)
SPRING DAMPER
(PL21.1.39)
HARNESS ASSY
DUP (PL21.1.7)
HARNESS ASSY DUP EARTH
(PL21.1.28)
COVER HSG DUP
(PL21.1.18)
PWBA DUPLEX
(PL21.1.32)
J23614AA


MOTOR DUPLEX
HARNESS ASSY
DUP SNR
HARNESS ASSY DUP
HARNESS ASSY
DUP EARTH
J23615AA

Removal

1) Remove the COVER LEFT (PL21.1.25). (RRP21.9)
2) Remove the COVER RIGHT (PL21.1.41). (RRP21.10)
3) Disconnect the connector (P/J50) of the HARNESS ASSY DUP (PL21.1.7) from the PWBA DUPLEX (PL21.1.32).
4) Remove the screw (silver, 6mm) securing the HARNESS ASSY DUP EARTH (PL21.1.28).
5) Release the HARNESS ASSY DUP from the harness clamp.
6) Remove the SCREW TAPPING (PL21.1.40) securing the SPRING DUMPER (PL21.1.39).
7) Remove the 2 SCREW HINGEs (PL21.1.11) securing the HSG LOWER DUP, and remove the HSG LOWER DUP from the COVER HSG DUP (PL21.1.18).

Replacement

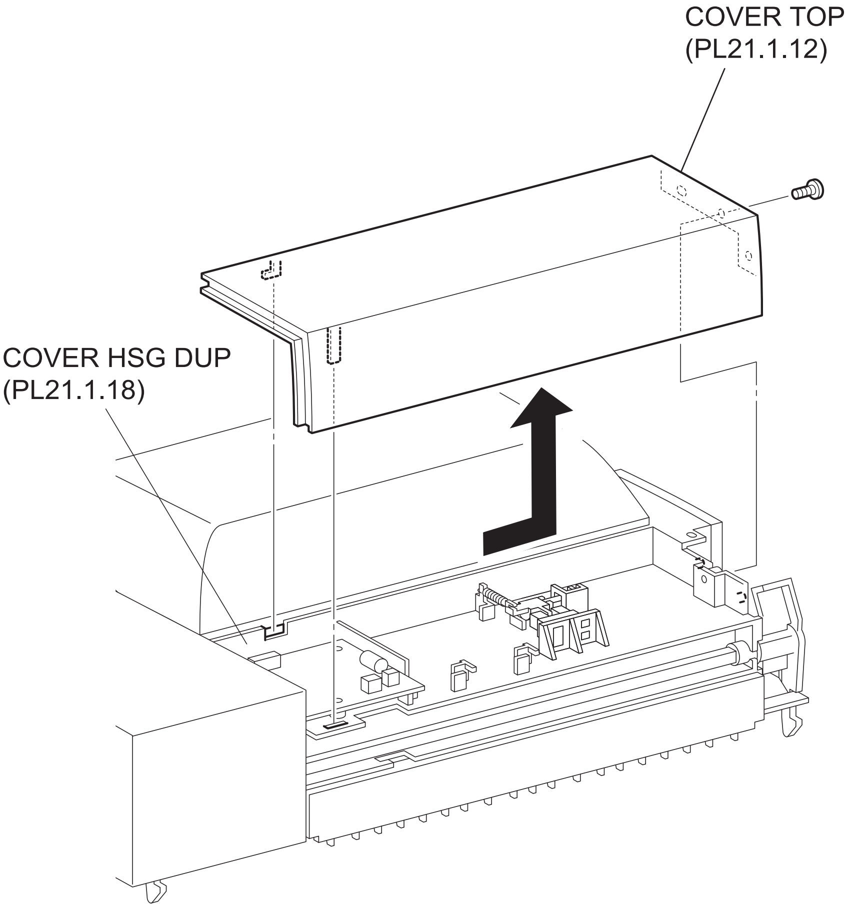
1) Install the HSG LOWER DUP to the COVER HSG DUP (PL21.1.18) using the 2 SCREW HINGEs (PL21.1.11).
2) Install the SPRING DAMPER (PL21.1.39) to the COVER HSG DUP using the SCREW TAPPING (PL21.1.40).
3) Secure the HARNESS ASSY DUP (PL21.1.7) using harness clamper as shown in the figure.
4) Secure the HARNESS ASSY DUP EARTH using the screw (silver, 6mm).
5) Connect the connector (P/J50) of the HARNESS ASSY DUP to the PWBA DUPLEX (PL21.1.32).
6) Install the COVER RIGHT (PL21.1.41). (RRP21.10)

NOTE **When installing, be sure to fit the positioning holes on the COVER RIGHT to the bosses on the COVER HSG DUP.**

7) Install the COVER LEFT (Pl21.1.25). (RRP21.9)

NOTE **When installing, be sure to fit the positioning holes on the COVER LEFT to the bosses on the COVER HSG DUP.**

RRP21.4 COVER TOP (PL21.1.12)


COVER TOP
(PL21.1.12)
COVER HSG DUP
(PL21.1.18)
J23604AA

Removal

1) Remove the COVER RIGHT (PL21.1.41). (RRP21.10)
2) Remove the screw (gold tapping, 8mm) securing the COVER TOP to the COVER HSG DUP (PL21.1.18).
3) Shift the COVER TOP in the direction of the arrow to release the 4 hooks, and remove the COVER TOP from the COVER HSG DUP.

Replacement

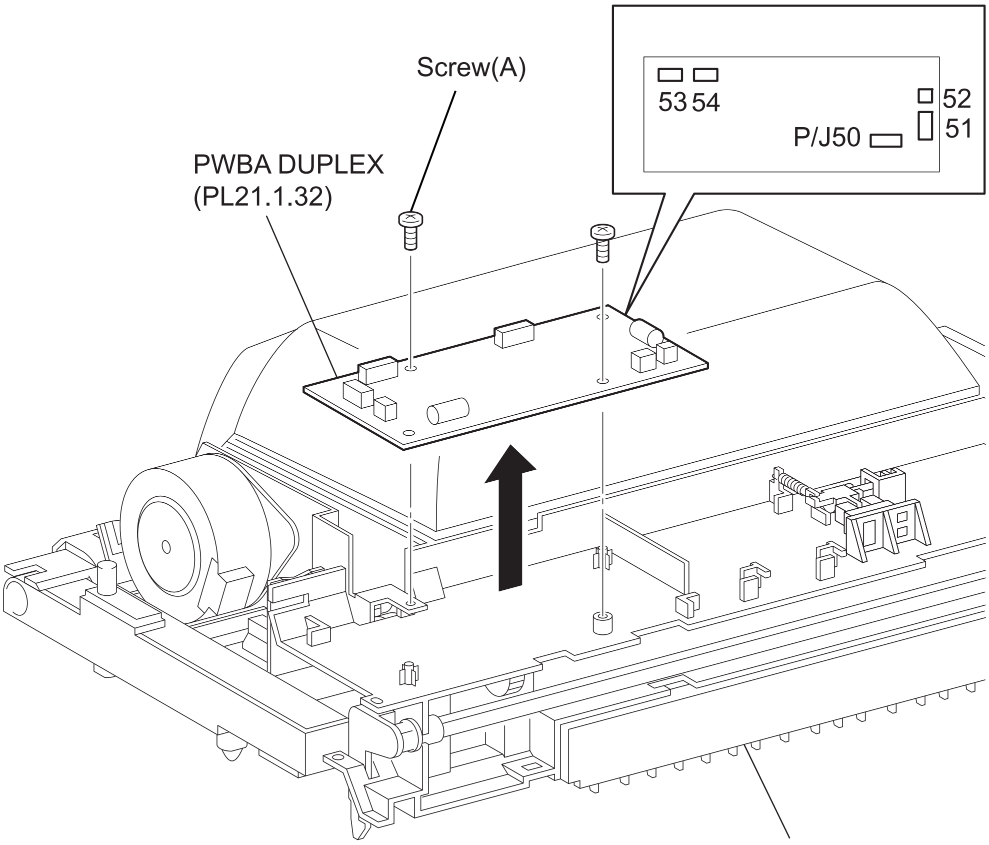
1) Shift the COVER TOP in the opposite direction of the arrow to install it to the COVER HSG DUP (PL21.1.18), and secure it using the 4 hooks.

   NOTE **When installing, be sure to fit the positioning holes on the COVER TOP to the bosses on the COVER HSG DUP.**

2) Install the COVER TOP to the COVER HSG DUP using the screw (gold tapping, 8mm).
3) Install the COVER RIGHT (PL21.1.41). (RRP21.10)

   NOTE **When installing, be sure to fit the positioning holes on the COVER RIGHT to the bosses on the COVER HSG DUP.**

RRP21.5   PWBA DUPLEX (PL21.1.32)


Screw(A)
PWBA DUPLEX
(PL21.1.32)
53
54
52
51
P/J50
COVER HSG DUP
(PL21.1.18)

J23605AA

Removal

1) Remove the COVER LEFT (PL21.1.25). (RRP21.9)
2) Remove the COVER RIGHT (PL21.1.41). (RRP21.10)
3) Remove the COVER TOP (PL21.1.12). (RRP21.4)
4) Disconnect the harness connectors from the connectors (P/J50, P/J51, P/J52, P/J53 and P/J 54) on the PWBA DUPLEX.
5) Remove the 2 screws (gold tapping, 8mm x 1, gold, 6mm x 1) securing the PWBA DUPLEX to the COVER HSG DUP (PL21.1.18).
6) Remove the PWA DUPLEX.

Replacement

1) Install the PWBA DUPLEX to the COVER DUPLEX (PL21.1.18) using the 2 screws (gold tapping, 8mm x 1, gold, 6mm x 1).

NOTE **Install the PWA DUPLEX to the COVER DUPLEX in the direction shown in the figure.**

NOTE **Be sure to tighten the screw (gold, 6mm) shown as "Screw (A)" in the figure.**

2)Connect the harness connectors to the connectors (P/J50, P/J51, P/J52, P/J53 and P/J 54) on the PWBA DUPLEX.

3) Install the COVER TOP (PL21.1.12). (RRP21.4)

NOTE **When installing, be sure to fit the positioning holes on the COVER TOP to the bosses on the COVER HSG DUP.**

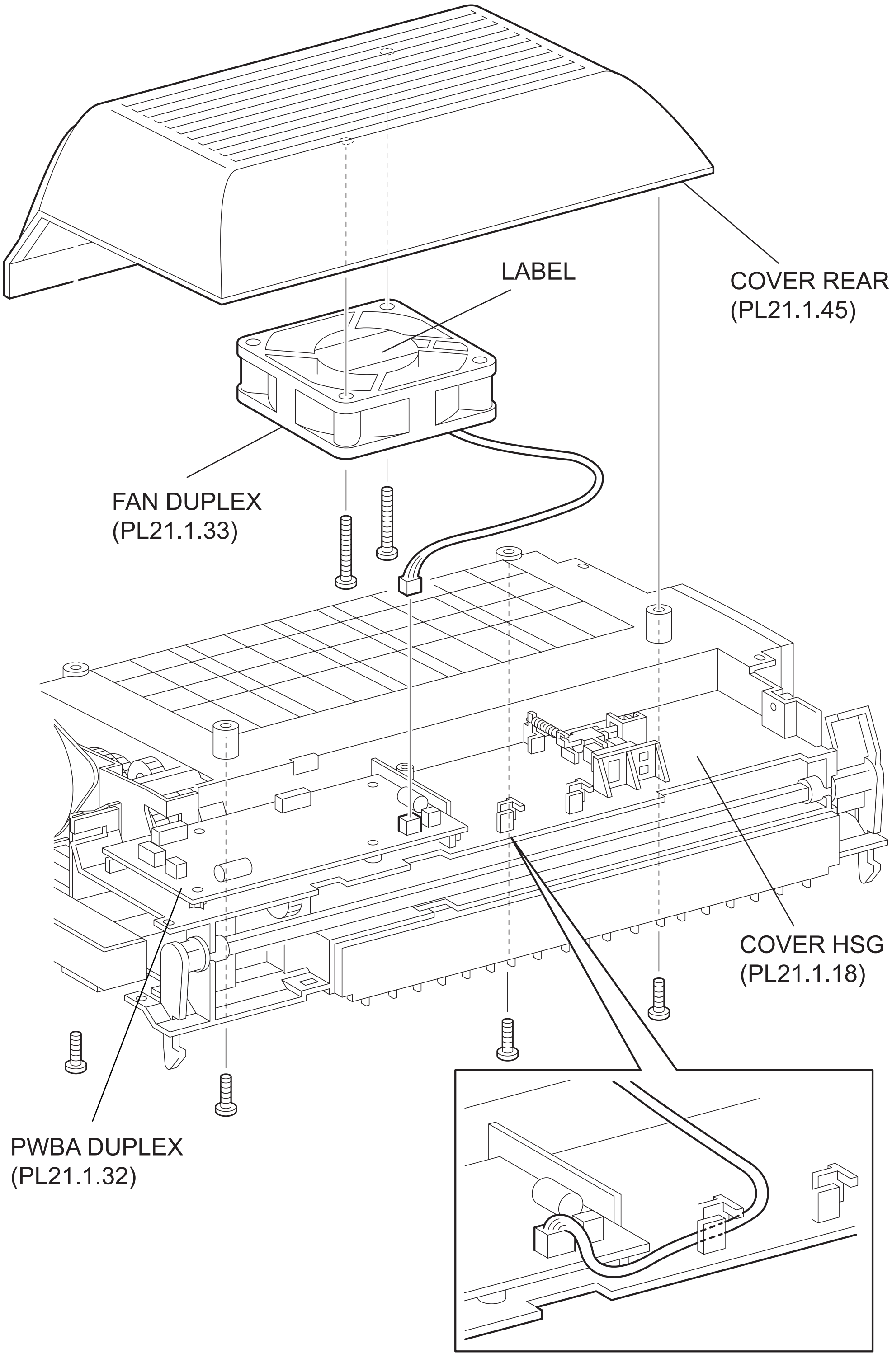
4) Install the COVER RIGHT (PL21.1.41). (RRP21.10)

NOTE **When installing, be sure to fit the positioning holes on the COVER RIGHT to the bosses on the COVER HSG DUP.**

5) Install the COVER LEFT (Pl21.1.25). (RRP21.9)

NOTE **When installing, be sure to fit the positioning holes on the COVER LEFT to the bosses on the COVER HSG DUP.**

RRP21.6 COVER REAR (PL21.1.45) , FAN DUPLEX (PL21.1.33)


LABEL
COVER REAR
(PL21.1.45)
FAN DUPLEX
(PL21.1.33)
COVER HSG DUP
(PL21.1.18)
PWBA DUPLEX
(PL21.1.32)

J23606AA

Removal

1) Remove the COVER RIGHT (PL21.1.41). (RRP21.10)
2) Remove the COVER TOP (PL21.1.12). (RRP21.4)
3) Disconnect the harness connector from the connector (P/J54) on the PWBA DUPLEX (PL21.1.32).
4) Release the harness of the FAN DUPLEX from the hook on the COVER HSG DUP (PL21.1.18).
5) Remove the 4 screws securing the COVER REAR to the COVER HSG DUP and remove the COVER REAR.
6) Remove the 2 screws (gold tapping, 22mm) securing the FAN DUPLEX to the COVER REAR and remove the FAN DUPLEX.

Replacement

1) Install the FAN DUPLEX to the COVER REAR using the 2 screws (gold tapping, 22mm).

NOTE **When installing, be sure to install the FAN DUPLEX so that the label is facing outside.**

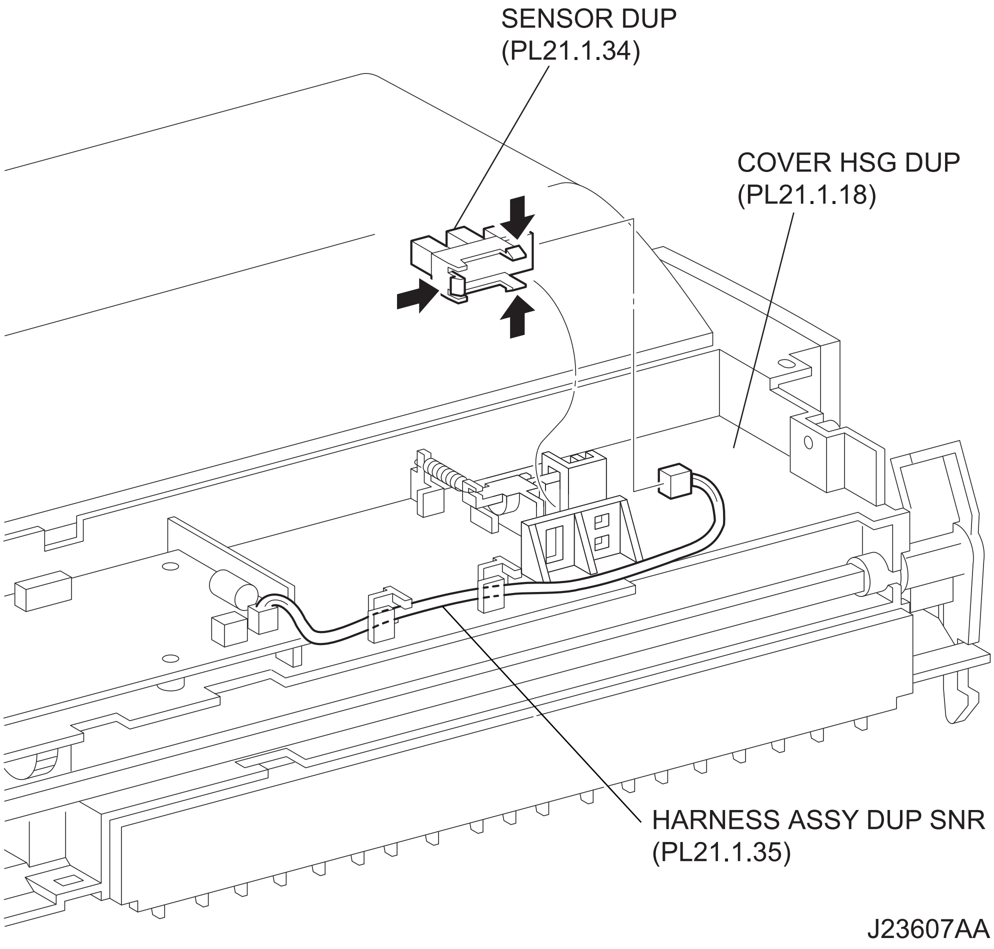
2) Install the COVER REAR to the COVER HSG DUP using the 4 screws
3) Secure the harness of the FAN DUPLEX to the hook on the COVER HSG DUP.
4) Connect the harness connector to the connector (P/J54) on the PWBA DUPLEX (PL21.1.32).
5) Install the COVER TOP (PL21.1.12). (RRP21.4)

NOTE **When installing, be sure to fit the positioning holes on the COVER TOP to the bosses on the COVER HSG DUP.**

6) Install the COVER RIGHT (PL21.1.41). (RRP21.10)

NOTE **When installing, be sure to fit the positioning holes on the COVER RIGHT to the bosses on the COVER HSG DUP.**

RRP21.7 SENSOR DUP (PL21.1.34)


SENSOR DUP
(PL21.1.34)
COVER HSG DUP
(PL21.1.18)
HARNESS ASSY DUP SNR
(PL21.1.35)
J23607AA

Removal

1) Remove the COVER RIGHT (PL21.1.41). (RRP21.10)
2) Remove the COVER TOP (PL21.1.12). (RRP21.4)
3) Release the hooks of the SENSOR DUP, and remove it from the COVER HSG DUP (PL21.1.18).
4) Disconnect the connector (P/J530) of the HARNESS ASSY DUP SNR (PL21.1.35) form the SENSOR DUP.

Replacement

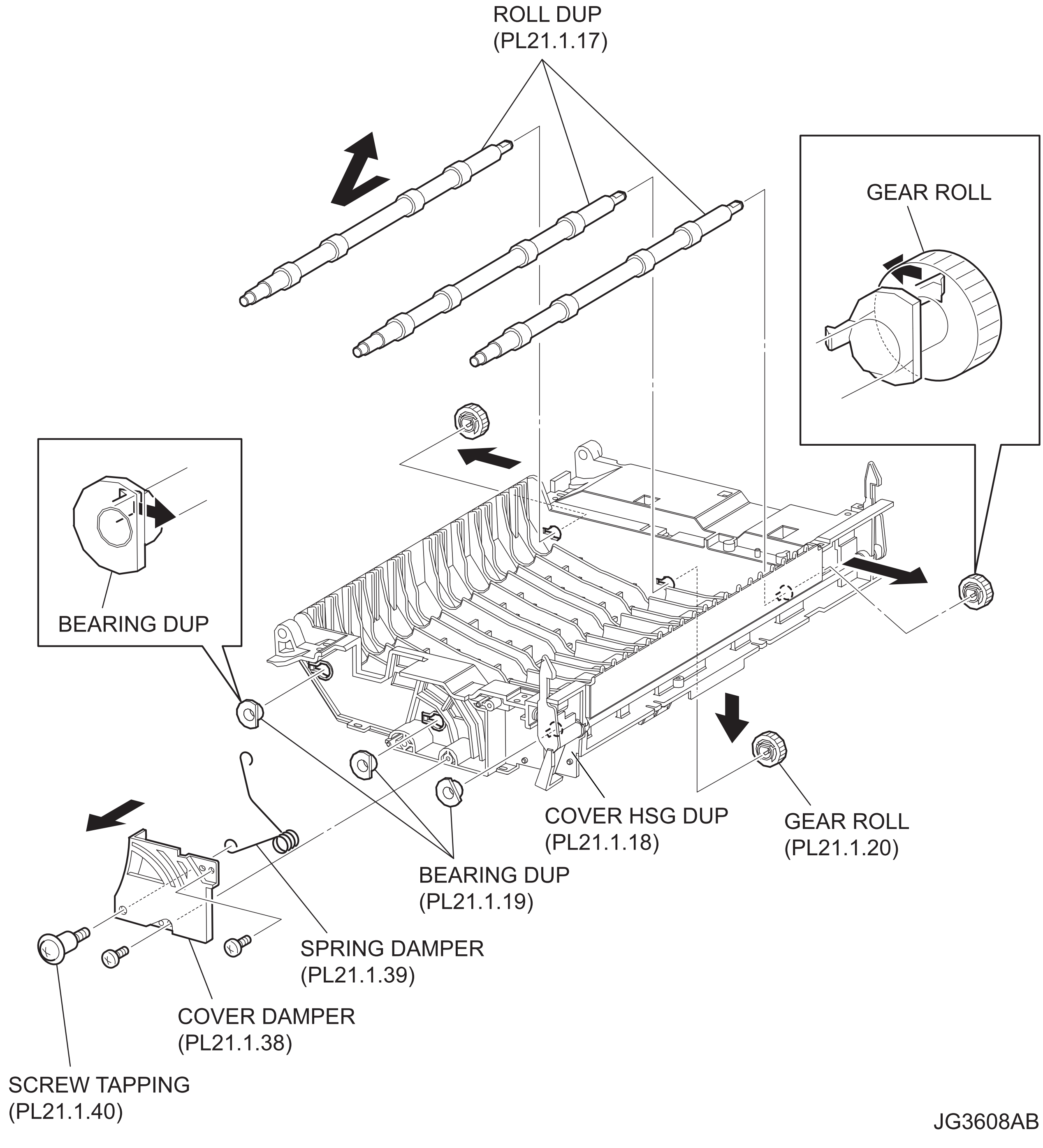
1) Connect the connector (P/J 530) of the HARNESS ASSY DUP SNR (PL21.1.35) to the SENSOR DUP.
2) Install the SENSOR DUP to the COVER HSG DUP (PL21.1.18), and secure it with the hooks.
3) Install the COVER TOP (PL21.1.12). (RRP21.4)

NOTE **When installing, be sure to fit the positioning holes on the COVER TOP to the bosses on the COVER HSG DUP.**

4) Install the COVER RIGHT (PL21.1.41). (RRP21.10)

NOTE **When installing, be sure to fit the positioning holes on the COVER RIGHT to the bosses on the COVER HSG DUP.**

RRP21.8 ROLL DUP (PL21.1.17)


ROLL DUP
(PL21.1.17)
GEAR ROLL
BEARING DUP
COVER HSG DUP
(PL21.1.18)
GEAR ROLL
(PL21.1.20)
BEARING DUP
(PL21.1.19)
SPRING DAMPER
(PL21.1.39)
COVER DAMPER
(PL21.1.38)
SCREW TAPPING
(PL21.1.40)
JG3608AB

Removal

1) Remove the COVER LEFT (PL21.1.25). (RRP21.9)
2) Remove the COVER RIGHT (PL21.1.41). (RRP21.10)
3) Remove the HSG UPPER ASSY (PL21.1.1). (RRP21.2)
4) Remove the HSG LOWER DUP (PL21.1.6). (RRP21.3)
5) Remove the 2 screws (gold tapping, 8mm) and the SCREW TAPPING (PL21.1.40) securing the COVER DAMPER (PL21.1.38) to the COVER HSG DUP (PL21.1.18).
6) Remove the COVER DAMPER (PL21.1.38) and SPRING DAMPER (PL21.1.39) from the COVER HSG DUP.

NOTE **For the following step, be careful not to lose any gear, as the working space is limited.**

7) Release the hooks of 3 BEARING DUPs (PL21.1.19) on the other side of the GEAR ROLL from the inside, and remove 3 BEARING DUPs from the COVER HSG DUP.
8) Release the hooks of 3 GEAR ROLLs (PL21.1.20), and remove them from the ROLL DUP.
9) Remove 3 ROLL DUPs by moving them in the direction of the arrow.

NOTE **When removing, do not hold the rubber rollers of the ROLL DUP.**

Replacement

1) Move 3 ROLL DUPs in the opposite direction of the arrow, and install them to the BEARING DUP (PL21.1.19) on the GEAR ROLL (PL21.1.20) side

NOTE **When installing, do not hold the rubber rollers of the ROLL DUP.**

2) Put the BEARING DUP into the ROLL DUP on the opposite side of the GEAR ROLL, and inset it into the hole on the COVER HSG DUP (PL12.1.18), and then secure it with the hook.
3) Lock 3 GEAR ROLLs to the ROLL DUP with hook.
4) Install the COVER DAMPER (PL21.1.38) and SPRING DAMPER (PL21.1.39) to the COVR HSG DUP using the 2 screws (gold tapping, 8mm) and the SCREW TAPPING (PL21.1.40).

NOTE **The SCREW TAPPING securing the COVER DAMPER is tightened together with the SPRING DAMPER.**

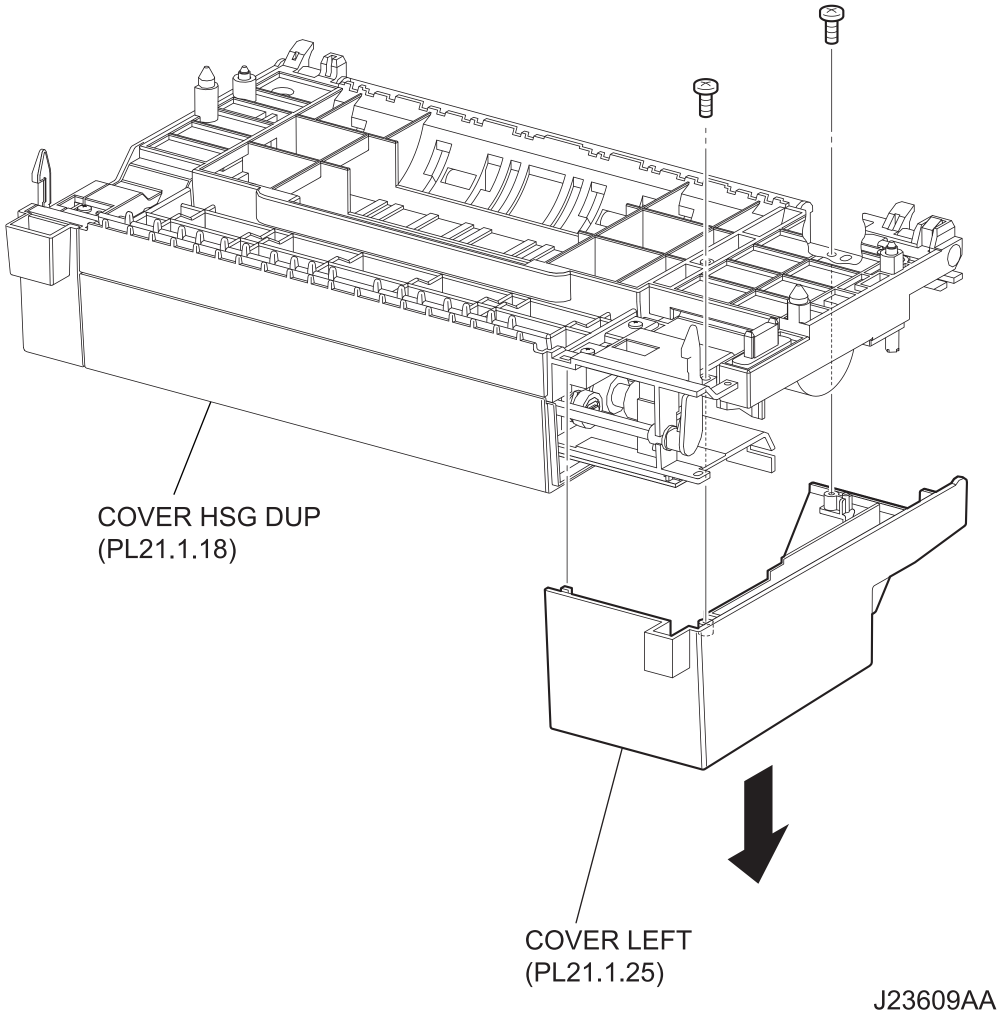
5) Install the HSG LOWER DUP (PL21.1.6). (RRP21.3)
6) Install the HSG UPPER ASSY (PL21.1.1). (RRP21.2)
7) Install the COVER RIGHT (PL21.1.41). (RRP21.10)

NOTE **When installing, be sure to fit the positioning holes on the COVER RIGHT to the bosses on the COVER HSG DUP.**

8) Install the COVER LEFT (PL21.1.25). (RRP21.9)

NOTE **When installing, be sure to fit the positioning holes on the COVER LEFT to the bosses on the COVER HSG DUP.**

RRP21.9 COVER LEFT (PL21.1.25)


COVER HSG DUP
(PL21.1.18)
COVER LEFT
(PL21.1.25)
J23609AA

Removal

1) Remove the 2 screws (gold tapping, 8mm) securing the COVER LEFT.
2) Remove the COVER LEFT from the COVER HSG DUP (PL21.1.18).

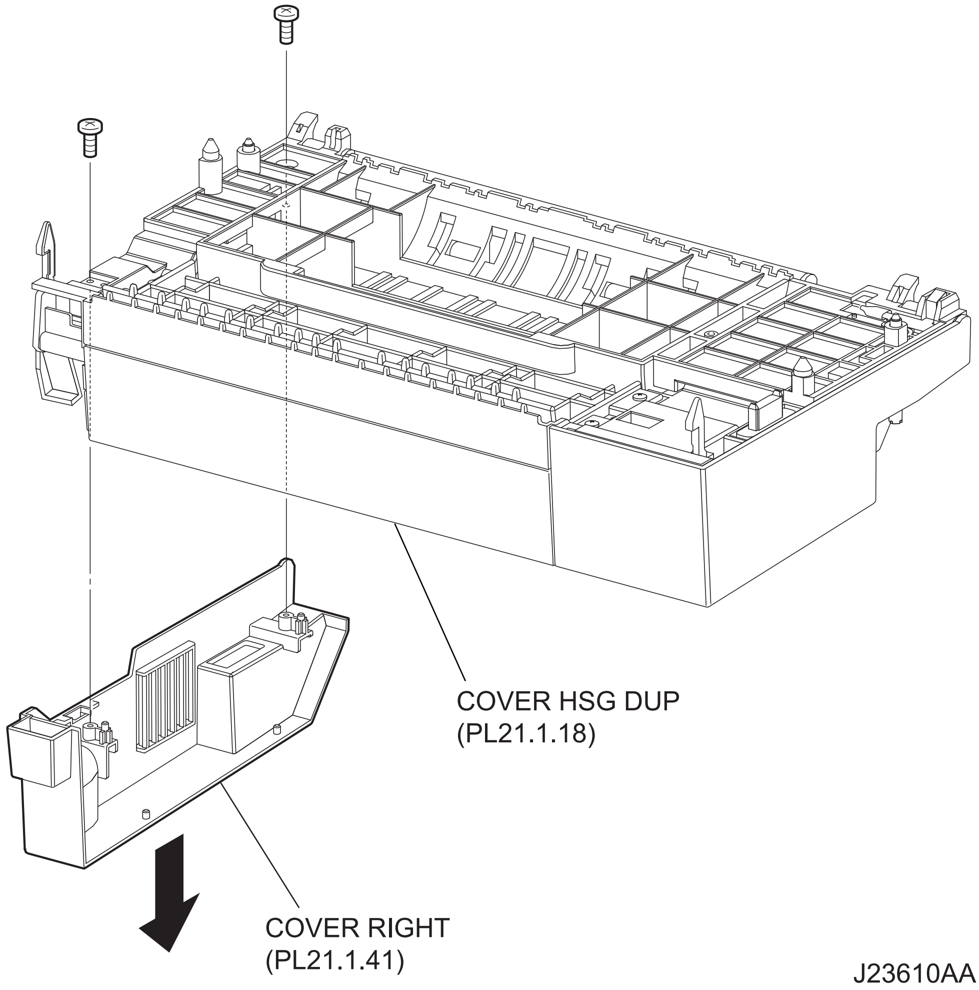
Replacement

1) Install the COVER LEFT to the COVER HSG DUP (PL21.1.18) using the 2 screws (gold tapping, 8mm).

NOTE

When installing, be sure to fit the positioning holes on the COVER LEFT to the bosses on the COVER HSG DUP.

RRP21.10   COVER RIGHT (PL21.1.41)


COVER HSG DUP
(PL21.1.18)
COVER RIGHT
(PL21.1.41)
J23610AA

Removal

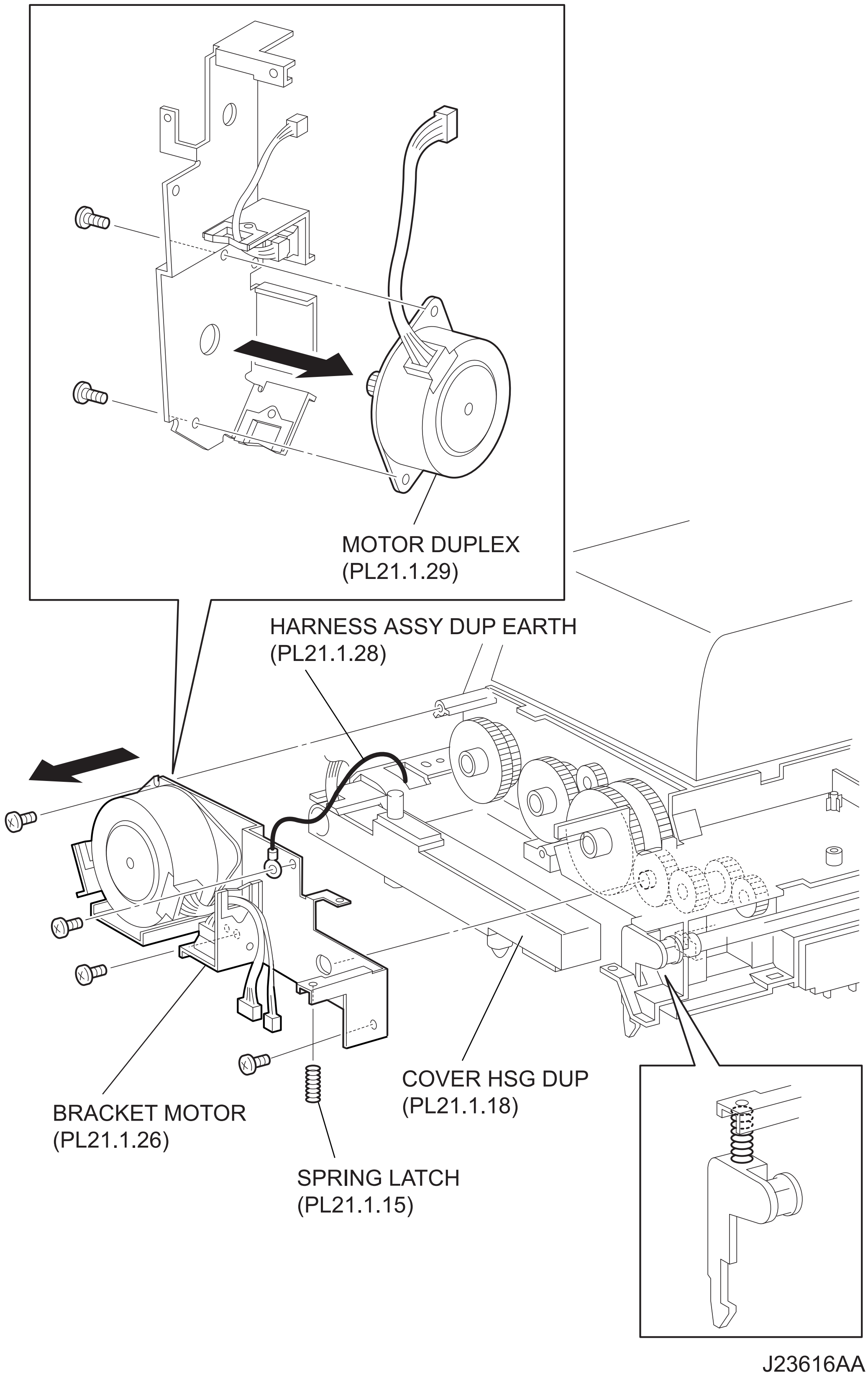
1) Remove the 2 screws (gold tapping, 8mm) securing the COVER RIGHT.
2) Remove the COVER RIGHT from the COVER HSG DUP (PL21.1.18).

Replacement

1) Install the COVER RIGHT to the COVER HSG DUP (PL21.1.18) using the 2 screws (gold tapping, 8mm).

NOTE **When installing, be sure to fit the positioning holes on the COVER RIGHT to the bosses on the COVER HSG DUP.**

RRP21.11 MOTOR DUPLEX (PL21.1.29)


MOTOR DUPLEX
(PL21.1.29)
HARNESS ASSY DUP EARTH
(PL21.1.28)
COVER HSG DUP
(PL21.1.18)
BRACKET MOTOR
(PL21.1.26)
SPRING LATCH
(PL21.1.15)
J23616AA

Removal

1) Remove the COVER LEFT (PL21.1.25). (RRP21.9)
2) Remove the COVER TOP (PL21.1.12). (RRP21.4)
3) Remove the PWBA DUPLEX (PL21.1.32). (RRP21.5)
4) Remove the screw (silver, 6mm) securing the HARNESS ASSY DUP EARTH (PL21.1.28)
5) Remove the 3 screws (gold tapping, 8mm) securing the BRACKET MOTOR (PL21.1.26) to the COVER HSG DUP (PL21.1.18).
6) Remove the SPRING LATCH (PL21.1.16) between the LEVER LATCH LEFT (PL21.1.15) and BRACKET MOTOR (PL21.1.26).
7) Remove the BRACKET MOTOR together with the MOTOR DUPLEX and SWITCH DUPLEX (PL21.1.27).

NOTE **When removing the BRACKET MOTOR, be careful not to lose the gears attached to the COVER HSG DUP.**

8) Remove the 2 screws (gold, 6mm) securing the MOTOR DUPLEX to the BRACKET MOTOR.
9) Remove the MOTOR DUPLEX.

Replacement

1) Install the MOTOR DUPLEX to the BRACKET MOTOR using the 2 screws (gold, 6mm).

NOTE **When installing the MOTOR DUPLEX, be careful in the installing direction.**

2) Install the BRACKET MOTOR to the COVER HSG DUP (PL21.1.18) using the 3 screws (gold tapping, 8mm).

NOTE **When installing the BRACKET MOTOR, be careful not to lose the gears.**

3) **Install the SPRING LATCH (PL21.1.16) between the LEVER LATCH LEFT (PL21.1.15) and BRACKET MOTOR.**
4) Install the HARNESS ASSY DUP EARTH (PL21.1.28) using the screw (silver, 6mm).
5) Install the PWBA DUPLEX (PL21.1.32). (RRP21.5)

NOTE **When installing, be careful in the installing direction.**

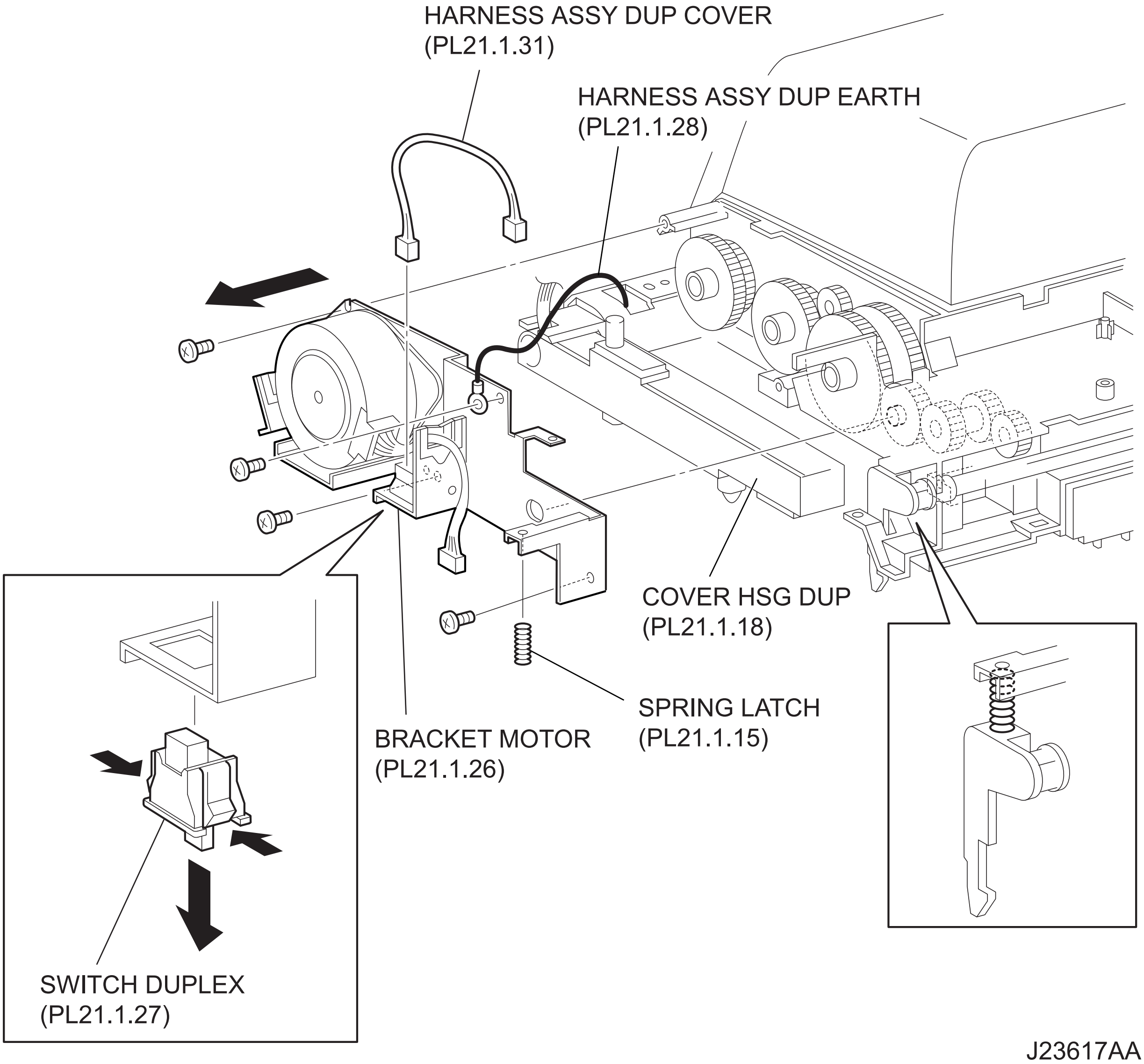
6) Install the COVER TOP (PL21.1.12). (RRP21.4)

NOTE **When installing, be sure to fit the positioning holes on the COVER TOP to the bosses on the COVER HSG DUP.**

7) Install the COVER LEFT (PL21.1.25). (RRP21.9)

NOTE **When installing, be sure to fit the positioning holes on the COVER LEFT to the bosses on the COVER HSG DUP.**

RRP21.12 SWITCH DUPLEX (PL21.1.27)


HARNESS ASSY DUP COVER
(PL21.1.31)
HARNESS ASSY DUP EARTH
(PL21.1.28)
COVER HSG DUP
(PL21.1.18)
SPRING LATCH
(PL21.1.15)
BRACKET MOTOR
(PL21.1.26)
SWITCH DUPLEX
(PL21.1.27)
J23617AA

Removal

1) Remove the COVER LEFT (PL21.1.25). (RRP21.9)
2) Remove the COVER TOP (PL21.1.12). (RRP21.4)
3) Remove the PWBA DUPLEX (PL21.1.32). (RRP21.5)
4) Remove the screw (silver, 6mm) securing the HARNESS ASSY DUP EARTH (PL21.1.28).
5) Remove the 3 screws (gold tapping, 8mm) securing the BRACKET MOTOR (PL21.1.26) to the COVER HSG DUP (PL21.1.18).

6) Remove the SPRING LATCH (PL21.1.16) between the LEVER LATCH LEFT (PL21.1.15) and BRACKET MOTOR.
7) Remove the BRACKET MOTOR together with the MOTOR DUPLEX (PL21.1.29) and SWITCH DUPLEX.

NOTE **When removing the BRACKET MOTOR, be careful not to lose the gears attached to the COVER HSG DUP.**

8) Disconnect the connector of the HARNESS ASSY DUP COVER (PL21.1.31) from the connector (P/J52) of the SWITCH DUPLEX.
9) Release the hooks of the SWITCH DUPLEX, and remove it from the BRACKET MOTOR.

Replacement

1) Install the SWITCH DUPLEX to the BRACKET MOTOR with hooks.
2) Connect the connector of the HARNESS ASSY DUP COVER (PL21.1.31) to the connector (P/J52) of the SWITCH DUPLEX.
3) Install the BRACKET MOTOR to the COVER HSG DUP (PL21.1.18) using the 3 screws (gold tapping, 8mm).

NOTE **When installing the BRACKET MOTOR, be careful not to lose the gears.**

4) Install the SPRING LATCH (PL21.1.16) between the LEVER LATCH LEFT (PL21.1.15) and BRACKET MOTOR.
5) Install the HARNESS ASSY DUP EARTH (PL21.1.28) using the screw (silver, 6mm).
6) Install the PWBA DUPLEX (PL21.1.32). (RRP21.5)

NOTE **When installing the PWBA DUPLEX, be careful in the installing direction.**

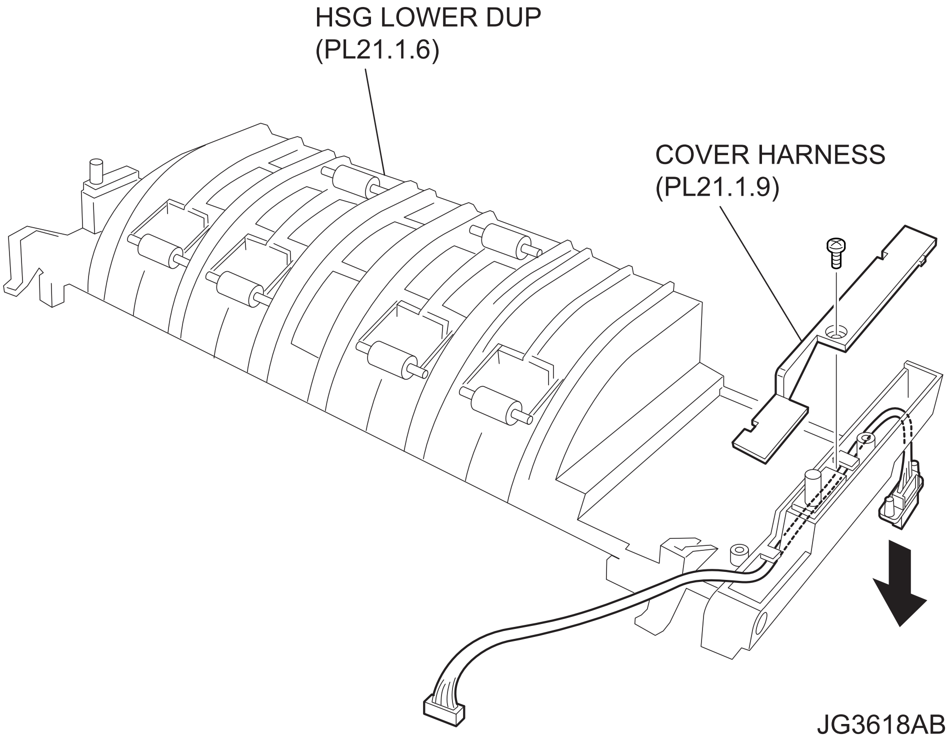
7) Install the COVER TOP (PL21.1.12). (RRP21.4)

NOTE **When installing, be sure to fit the positioning holes on the COVER TOP to the bosses on the COVER HSG DUP.**

8) Install the COVER LEFT (PL21.1.25). (RRP21.9)

NOTE **When installing, be sure to fit the positioning holes on the COVER LEFT to the bosses on the COVER HSG DUP.**

RRP21.13 COVER HARNESS (PL21.1.9), HARNESS ASSY DUP (PL21.1.7)


HSG LOWER DUP
(PL21.1.6)
COVER HARNESS
(PL21.1.9)
JG3618AB

Removal

1) Remove the COVER LEFT (PL21.1.25). (RRP21.9)
2) Remove the COVER RIGHT (PL21.1.41). (RRP21.10)
3) Remove the HSG LOWER DUP (PL21.1.6). (RRP21.3)
4) Remove the screw (gold tapping, 8mm) securing the COVER HARNESS R.
5) Release the 2 hooks of the COVER HARNESS, and remove it from the HSG LOWER DUP.
6) Disconnect the connector of the HARNESS ASSY DUP (PL21.1.7) from the HSG LOWER DUP (PL21.1.6), and remove the HARNESS ASSY DUP (PL21.1.7).

Replacement

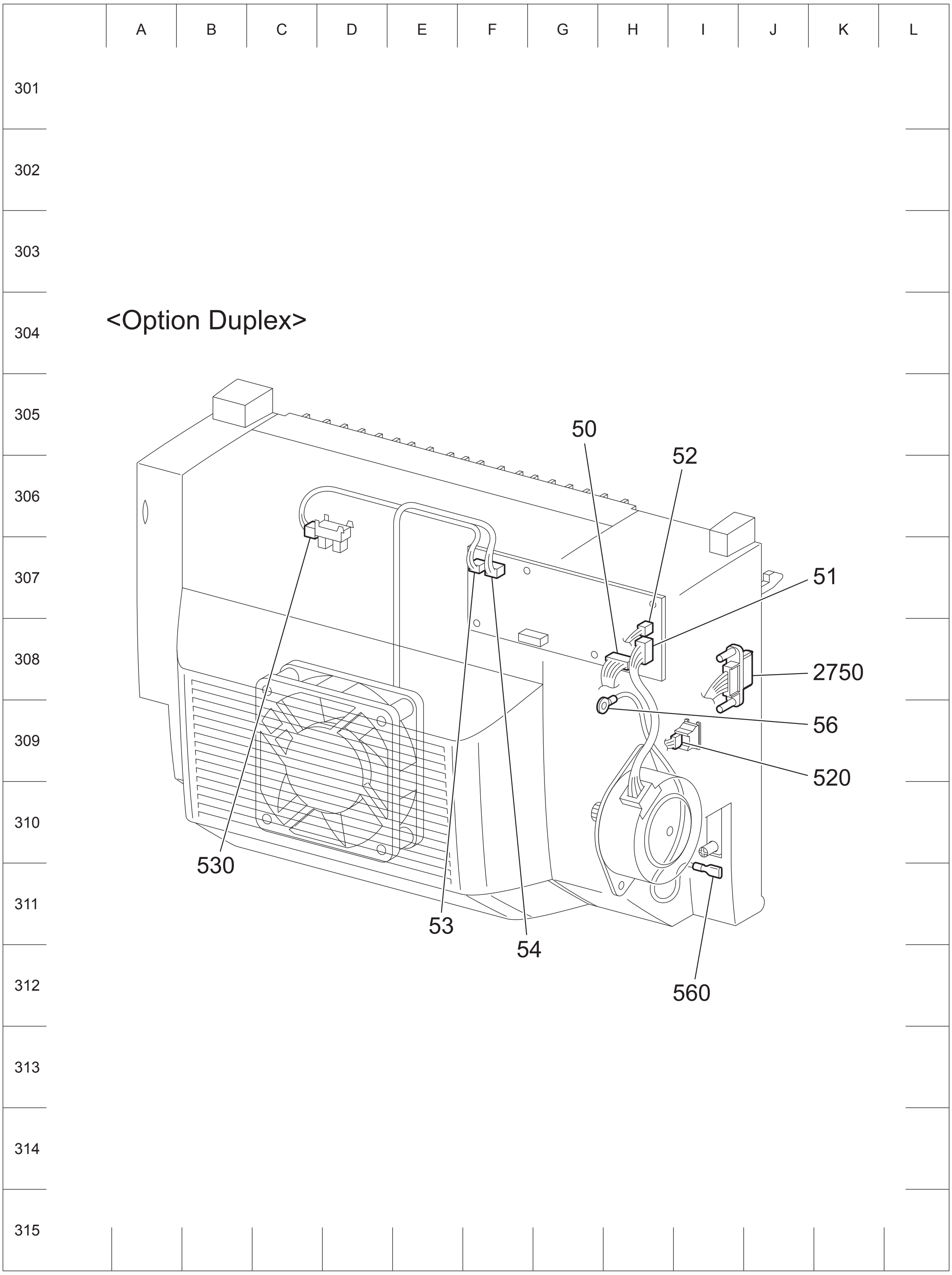
1) Connect the connector of the HARNESS ASSY DUP (PL21.1.7) to the HSG LOWER DUP (PL21.1.6).
2) Install the COVER HARNERSS to the HSG LOWER DUP, and fix it with the 2 hooks.
3) Secure the COVER HARNESS with the screw (gold tapping, 8mm).
4) Install the HSG LOWER DUP (PL21.1.6). (RRP21.3)
5) Install the COVER RIGHT (PL21.1.41). (RRP21.10)
6) Install the COVER LEFT (PL21.1.25). (RRP21.9)

4. Connector [P (plug) / J (jack)]

4.1 List of P/J

P/J	Coordinates	Remarks
50	H-308	Connects HARNESS ASSY DUP and PWBA DUPLEX
51	H-308	Connects MOTOR DUPLEX and PWBA DUPLEX
52	H-308	Connects HARNESS ASSY DUP COVER and PWBA DUPLEX
53	F-307	Connects HARNESS ASSY DUP SNR and PWBA DUPLEX
54	F-307	Connects FAN DUPLEX and PWBA DUPLEX
56	H-309	Connects HARNESS ASSY DUP EARTH and PWBA DUPLEX
520	I-309	Connects SWITCH DUPLEX and HARNESS ASSY DUP COVER
530	C-306	Connects SENSOR DUP and HARNESS ASSY DUP SNR
560	I-311	Connects HARNESS ASSY DUP EARTH and EARTH ASSY PLATE
2750	I-308	Connects HARNESS ASSY DUP and HARNESS ASSY LVPS

4.2 P/J layout diagram

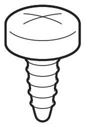
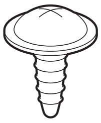
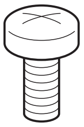
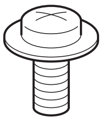
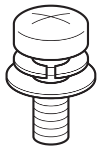
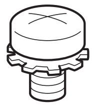
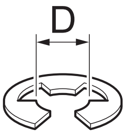

A
B
C
D
E
F
G
H
I
J
K
L
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
<Option Duplex>
50
52
51
2750
56
520
530
53
54
560

J24611AA

5. Parts List

5.1 Caution for use of parts list

- ◆ The figures indicating the illustrations are the item No. in the list and present correspondence between the illustrations and parts.
- ◆ The notation of PL "X.Y.Z" is composed of the plate (PL), item "X.Y", and parts "Z".
- ◆ The alphabet characters in the illustrations represent screws and clips as follows:

Type	Shape	PL No.	Size	PARTS No.
Screw for plastic Silver, tapping		S1	M3X6mm	153W27678
		S2	M3X8mm	153W27878
		S3	M3X30mm	826E11030
		S4	M3X29mm	826E29000
		S5	M3X22mm	826E13551
Screw for plastic Silver, with flange, tapping		S6	M3X8mm	826E13590
Screw for metal sheet Silver		S7	M3X6mm	026E14990
		S8	M3X6mm	026E16550
		S9	M3X6mm	826E12480
		S10	M3X10mm	826E22420
Screw for metal sheet Silver, with flange		S11	M3X8mm	026E87840
		S12	M3X8mm	826E22380
Screw for metal sheet Silver, with lock washer		S13	M3X8mm	112W27898
		S14	M3X10mm	112W28098
Screw for metal sheet Silver, with an external tooth washer		S15	M4X5mm	826E25640
Ring-E		E1	D3	354W21278
		E2	D4	354W24278

- ◆ "t" mark in the illustrations are attached to items indicating assembly parts in the illustrations.
- ◆ Encircled alphabetical figures in the illustrations indicate interrupted leader lines. Same characters in the illustrations represent lines to be connected.
- ◆ The mark "(with 2-5)" attached to assembly parts on the illustrations and lists represents that the items "2, 3, 4, and 5" of that plate are contained and the mark "(with 2-5, PL6.1.1) represent that the item "2, 3, 4, and 5" of that plate and the item "1" of the plate "6.1" are contained.
- ◆ The mark "[Same PLX.Y.Z]" attached to parts in the illustrations and lists resents that the parts is the same as the parts of the item "Z" of the plate "X.Y".

- The mark "H" attached to the item in the list represents "recommended spare parts" which can be usually supplied. (Supply of other parts shall be examined separately.)
- The mark "[" attached to parts in the list represents "Note" or "Reference" about that parts is contained in the same page.
- "HIGH ASSY" in the list represent the high level assembly parts containing that parts.

NOTE

For spare parts, refer to the "Spare parts list" which is issued separately.

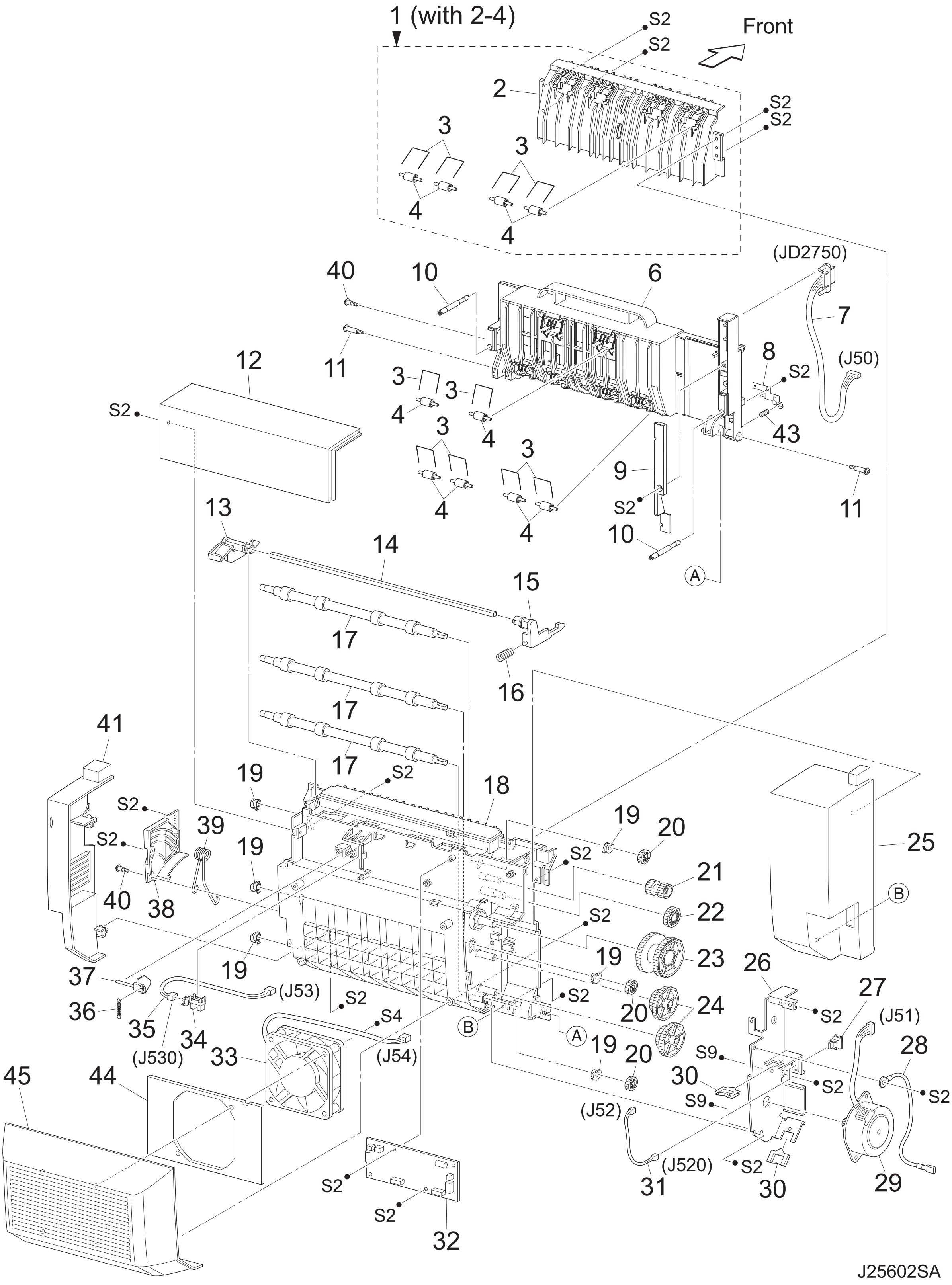
NOTE

For the connector (P/J), parts such as harness, wire, etc. in the list, refer to "Chapter 7, Wiring Diagrams and Signal Information"

NOTE

It should be noted that configuration of parts may be different or some parts are not used depending on specifications of OEM.

PL21.1 Option Duplex [Illustration]


1 (with 2-4)
S2
S2
Front
2
S2
S2
3
3
4
4
(JD2750)
40
10
6
7
(J50)
12
11
3
3
8
S2
S2
4
4
43
3
3
9
S2
4
4
11
13
10
14
A
15
17
16
17
41
17
19
S2
18
S2
39
19
20
S2
19
S2
21
S2
40
38
22
S2
25
B
19
23
26
37
19
(J53)
S2
S2
24
27
36
35
34
S4
B
A
20
S2
(J51)
(J530)
33
(J54)
19
20
S9
28
30
45
44
S2
S2
S9
(J52)
(J520)
S2
S2
31
30
29
S2
32
J25602SA

PL21.1 Option Duplex [List]

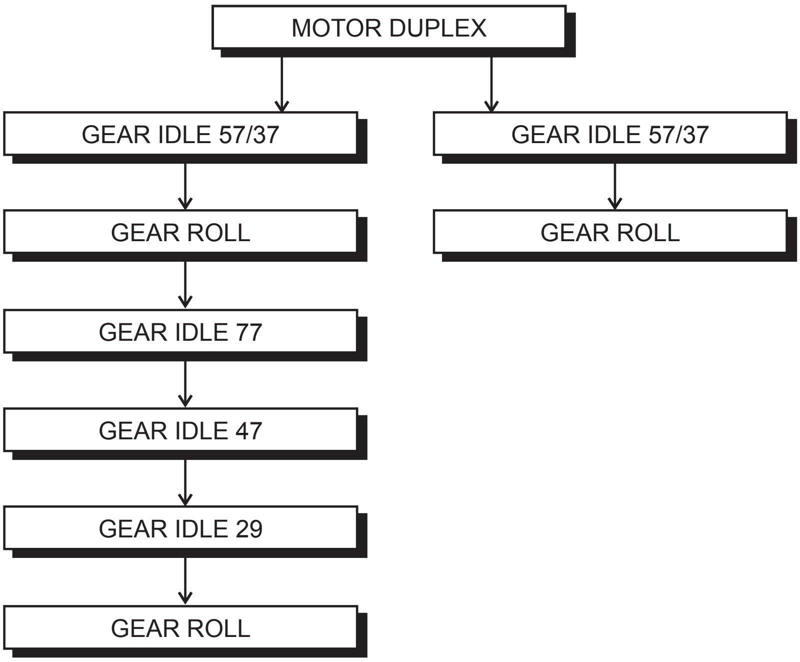
Item	Parts name
1	HSG UPPER ASSY (with 2-4)
2	HSG UPPER DUP
3	SPRING PINCH
4	ROLL PINCH
5	- -
6	HSG LOWER DUP
7	HARNESS ASSY DUP (J50-JD2750)
8	EARTH ASSY PLATE
9	COVER HARNESS
10	SCREW THUMB
11	SCREW HINGE
12	COVER TOP
13	LEVER LATCH RIGHT
14	SHAFT LATCH
15	LEVER LATCH LEFT
16	SPRING LATCH
17	ROLL DUP
18	COVER HSG DUP
19	BEARING DUP
20	GEAR ROLL
21	GEAR IDLE29
22	GEAR IDLE47
23	GEAR IDLE77
24	GEAR IDLE57/37
25	COVER LEFT
26	BRACKET MOTOR
27	SWITCH DUPLEX (P520)
28	HARNESS ASSY DUP EARTH (J56-JD560)
29	MOTOR DUPLEX (J51)
30	CLAMP-EDGE
31	HARNESS ASSY DUP COVER (J52-J520)
32	PWBA DUPLEX
33	FAN DUP (J54)
34	SENSOR DUP (P530)
35	HARNESS ASSY DUP SNR (J53-J530)
36	SPRING ACTUATOR
37	ACTUATOR DUP
38	COVER DAMPER
39	SPRING DAMPER
40	SCREW TAPPING
41	COVER RIGHT
42	- -
43	SPRING FG DUP
44	PLATE FAN DUP
45	COVER REAR DUP

6. Principle of Operation

6.1 Driving Force Transmission Path

6.1.1 MOTOR DUPLEX

The rotating force of the MOTOR DUPLEX is transmitted via various gears to components that need mechanical driving force as shown in the flow given below.


MOTOR DUPLEX
GEAR IDLE 57/37
GEAR IDLE 57/37
GEAR ROLL
GEAR ROLL
GEAR IDLE 77
GEAR IDLE 47
GEAR IDLE 29
GEAR ROLL

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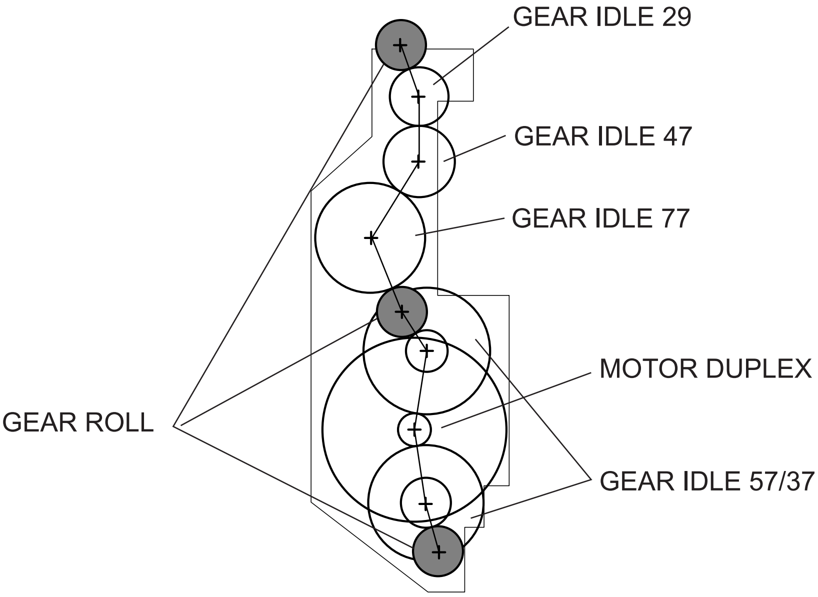
6.1.2 Gear Layout

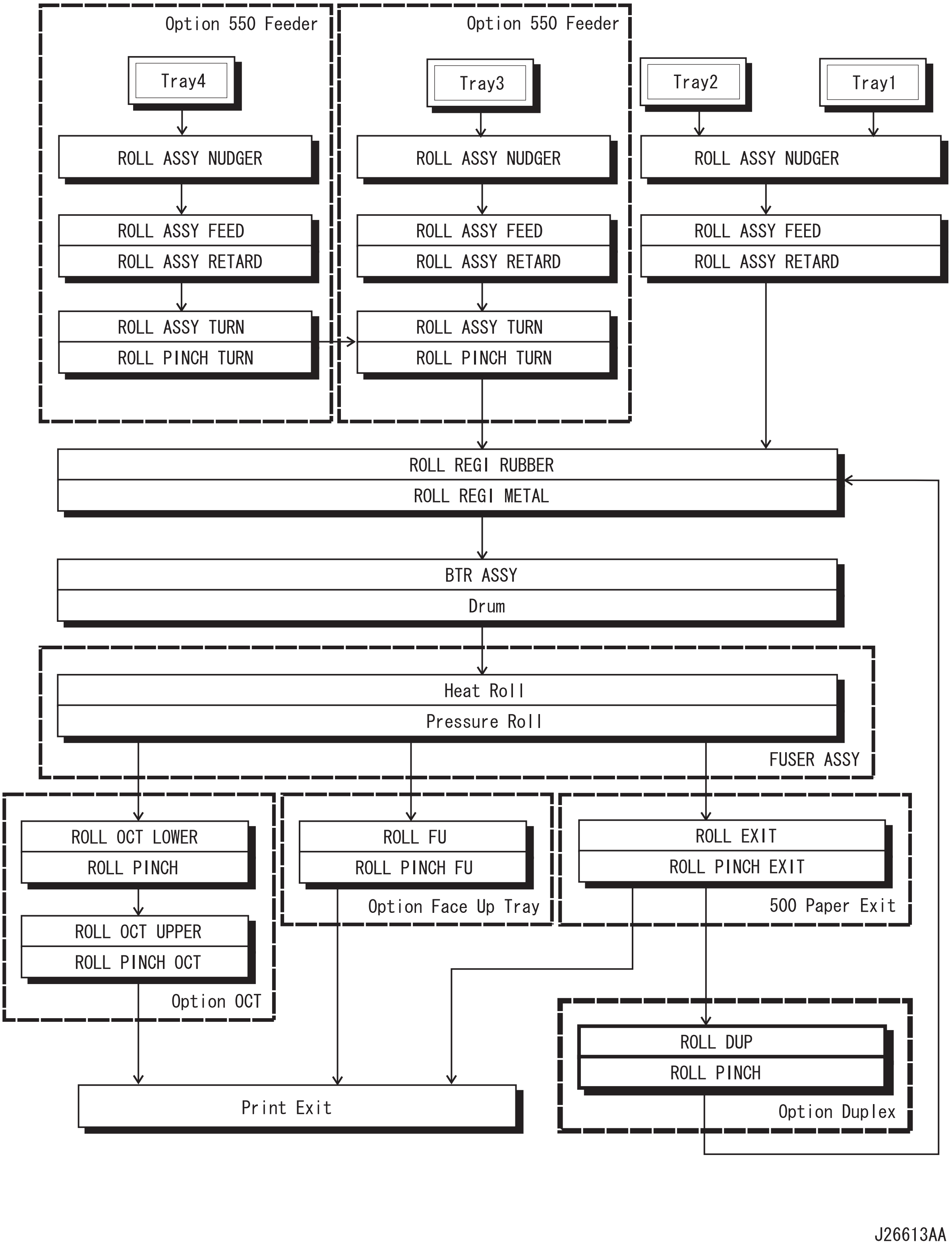

GEAR IDLE 29
GEAR IDLE 47
GEAR IDLE 77
MOTOR DUPLEX
GEAR ROLL
GEAR IDLE 57/37

J26612AA

6.2 Paper Transport

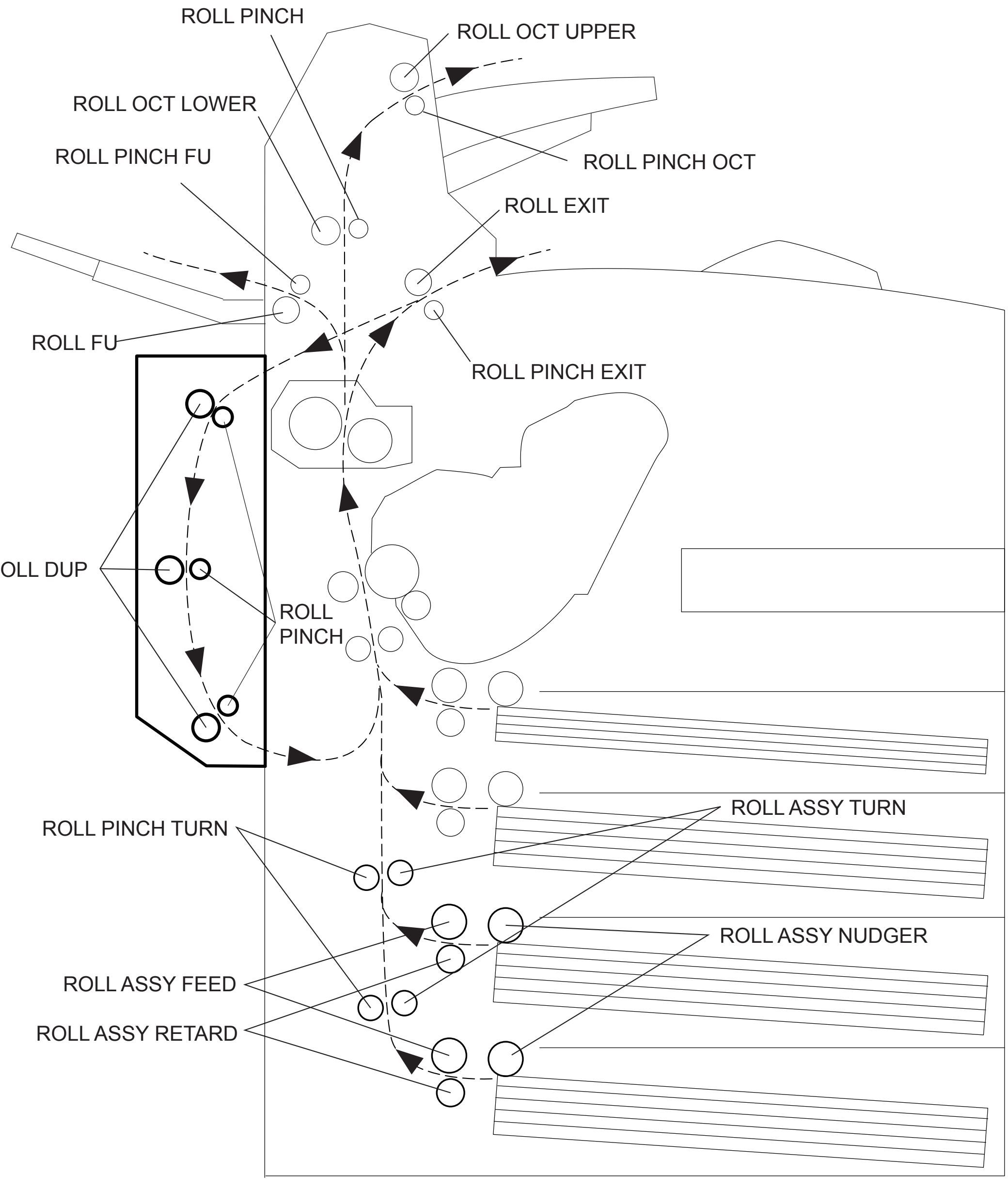
6.2.1 Paper Transport Path

When the Option Duplex has been added, the paper is transported in the sequence given below.


Option 550 Feeder
Option 550 Feeder
Tray4
Tray3
Tray2
Tray1
ROLL ASSY NUDGER
ROLL ASSY NUDGER
ROLL ASSY NUDGER
ROLL ASSY FEED
ROLL ASSY RETARD
ROLL ASSY FEED
ROLL ASSY RETARD
ROLL ASSY FEED
ROLL ASSY RETARD
ROLL ASSY TURN
ROLL PINCH TURN
ROLL ASSY TURN
ROLL PINCH TURN
ROLL REGI RUBBER
ROLL REGI METAL
BTR ASSY
Drum
Heat Roll
Pressure Roll
FUSER ASSY
ROLL OCT LOWER
ROLL PINCH
ROLL OCT UPPER
ROLL PINCH OCT
Option OCT
ROLL FU
ROLL PINCH FU
Option Face Up Tray
ROLL EXIT
ROLL PINCH EXIT
500 Paper Exit
ROLL DUP
ROLL PINCH
Option Duplex
Print Exit
J26613AA

6.2.2 Layout of Paper Transport Path

Main components regarding the transport of the paper when the Option Duplex is installed are given below.


ROLL PINCH
ROLL OCT UPPER
ROLL OCT LOWER
ROLL PINCH FU
ROLL PINCH OCT
ROLL EXIT
ROLL FU
ROLL PINCH EXIT
ROLL DUP
ROLL PINCH
ROLL PINCH TURN
ROLL ASSY TURN
ROLL ASSY NUDGER
ROLL ASSY FEED
ROLL ASSY RETARD
JG6614AA

6.3 Actions of Main Functional Components

The Option Duplex is available as an optional unit for JIGEN laser printer. Duplex printing is enabled by mounting this optional unit to the rear side of the base engine.

SWITCH DUPLEX

This switch detects that the HSG LOWER DUP and COVER HSG DUP are closed.

SENSOR DUP

This sensor detects the presence or absence of paper in the Duplex.

FAN DUPLEX

This fan vents air within the Duplex and takes in outside air, to prevent abnormal temperature rise in the Duplex.

ROLL DUP

This roll feeds the paper having the printed first surface back into the printer through the Duplex, to print on the second surface.

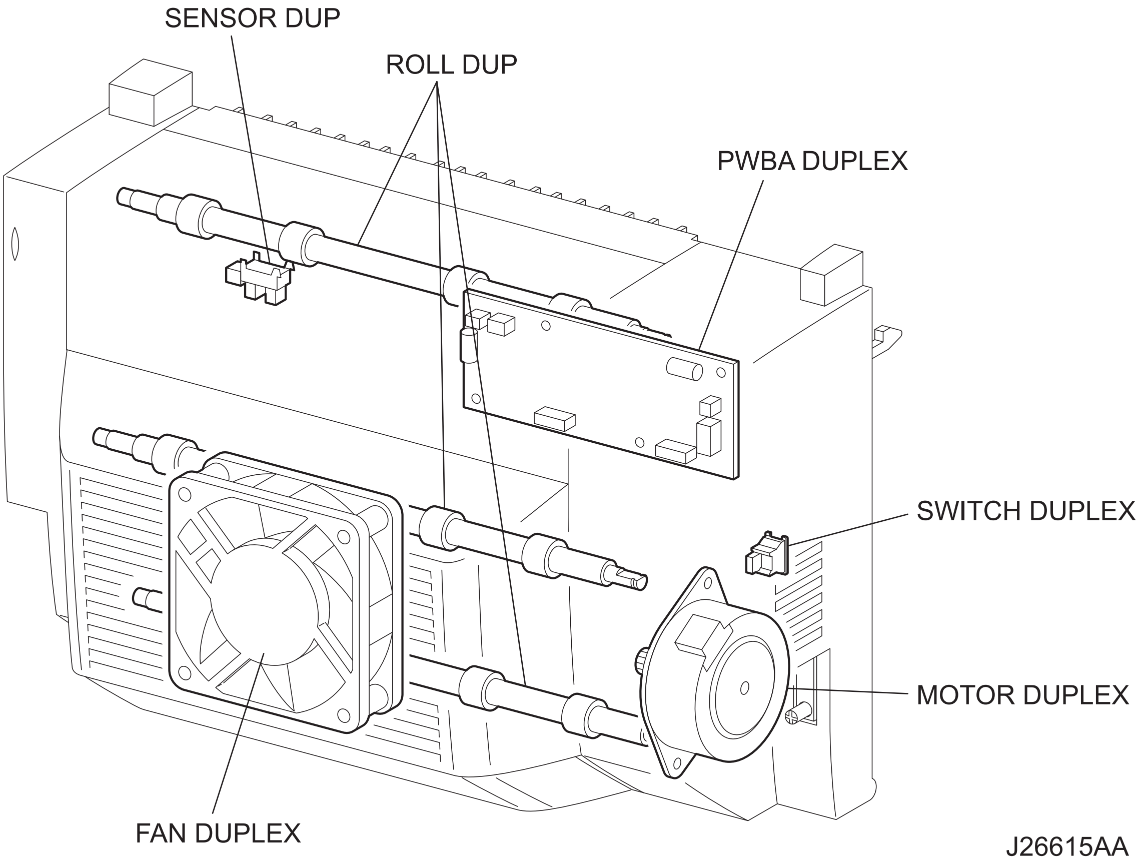
PWBA DUPLEX

A CPU is installed in the PWBA DUPLEX. This CPU receives instructions from HVPS/MCU and from sensors and switches, and controls feeding operation in the PWBA DUPLEX.

A flash ROM is used with the CPU installed in the PWBA DUPLEX, so that the firmware can be rewritten through communications.

MOTOR DUPLEX

This motor gives the driving force the three ROLL DUPs, which transport the paper into the printer.

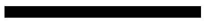
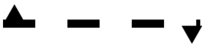
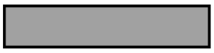
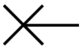
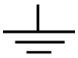
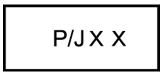
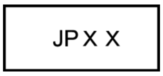
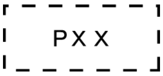
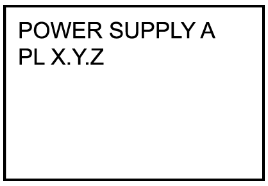
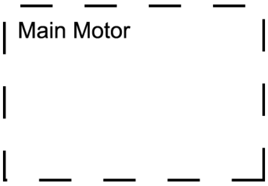
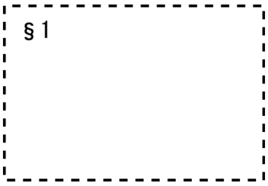
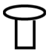

SENSOR DUP
ROLL DUP
PWBA DUPLEX
SWITCH DUPLEX
MOTOR DUPLEX
FAN DUPLEX
J26615AA

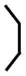
7. Wiring Diagram and Signal Information

7.1 Connection Wiring Diagram

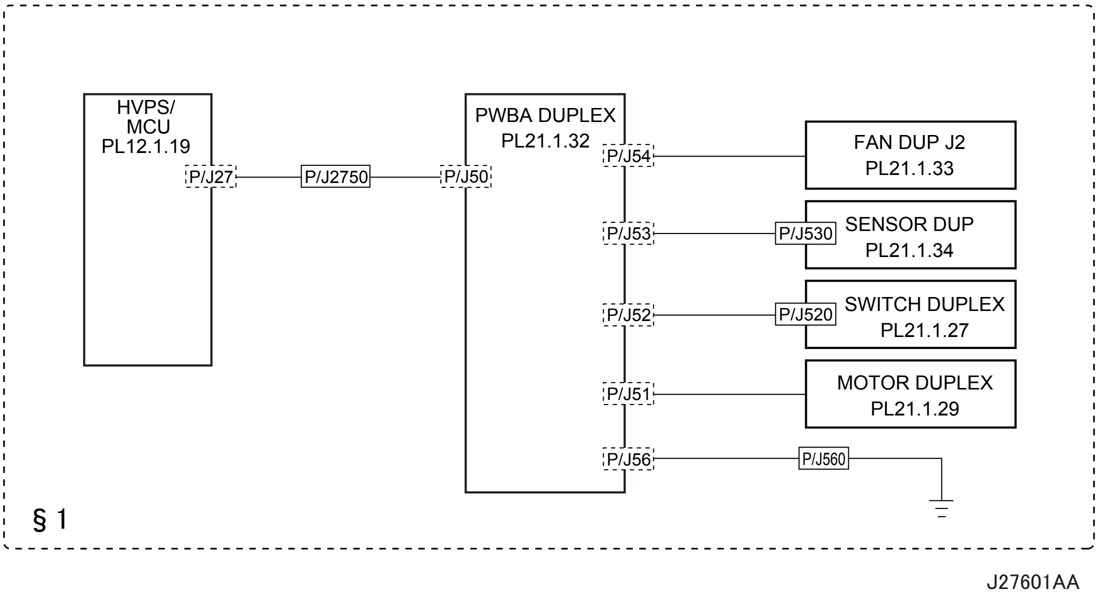
7.1.1 Symbols in the General Connection Wiring Diagram

The symbols in the general connection wiring diagram are described below.

Symbol	Description
	Represents an interconnection between parts using wiring harness or wire.
	Represents an interconnection which differs according to the specifications.
	Represents an interconnection between parts using a conductive member such as a plate spring.
	Represents a connection between parts by tightening of a screw.
	Indicates a frame ground.
	Represents a connector. The connector No. is indicated inside the box.
	Represents a connection terminal with a plate spring on the printed circuit board. The connector (terminal) No. is indicated inside the box.
	Represents a connector directly connected to the printed circuit board. The connector No. is indicated inside the box.
	The box containing a part name represents a part. "PL X.Y.Z" indicates the item "Z" of the plate (PL) "X.Y" described in Chapter 5 "Parts List."
	Represents a functional part within a part, and indicates the name of the functional part.
	Represents a section in "2. Interconnection Wiring Diagram of Parts," and indicates its section No.
	Represents a screw for fixing wiring harness and a conductive member such as a plate spring.

Symbol	Description
	Represents a conductive member such as a plate spring.

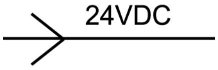
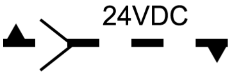
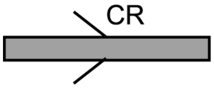
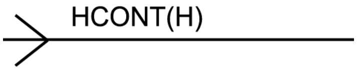
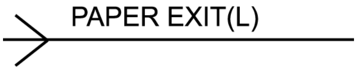
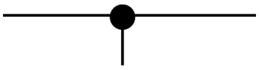
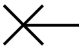
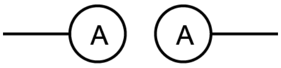
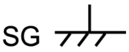
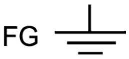
7.1.2 General Wiring Diagram

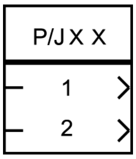
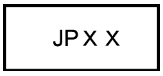
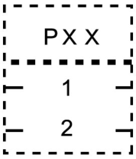
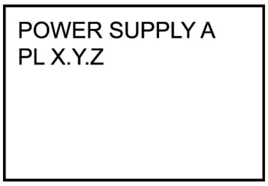
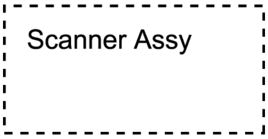

HVPS/
MCU
PL12.1.19
P/J27
P/J2750
P/J50
PWBA DUPLEX
PL21.1.32
P/J54
FAN DUP J2
PL21.1.33
P/J53
P/J530
SENSOR DUP
PL21.1.34
P/J52
P/J520
SWITCH DUPLEX
PL21.1.27
P/J51
MOTOR DUPLEX
PL21.1.29
P/J56
P/J560
§ 1
J27601AA

7.2 Interconnection Wiring Diagram of Parts

7.2.1 Instructions for the Use of the Interconnection Wiring Diagram of Parts

The symbols in the interconnection wiring diagram of parts are described below.
Note that the description of general symbols is omitted.

Symbol	Description
	Represents an interconnection between parts using wiring harness or wire, and indicates its signal name/contents. The arrow ">" or "<" on the line represents the direction of the signal.
	Represents an interconnection between parts using wiring harness or wire, which differs according to the specifications, and indicates its signal name/contents. The arrow ">" or "<" on the line represents the direction of the signal.
	Represents a interconnection between parts using a conductive member such as a plate spring, and indicates its signal name/ contents. The arrow ">" or "<" on the line represents the direction of the signal.
	Represents a function and a logical value (High (H) or Low (L)) of a signal when the function is activated. The voltage indicates a value when the signal is High. The arrow indicates the direction of the signal.
	Represents a function and a logical value (High (H) or Low (L)) of a signal when the function is in a detectable state. The voltage indicates a value when the signal is High. The arrow indicates the direction of the signal.
	Represents a connection between lead wires.
	Represents a connection between parts by tightening of a screw.
	Represents a connection between "A" and "A".
24VDC	The DC voltage indicates an approximate value measured when the negative side is connected to a signal ground (SG).
	Indicates a signal ground (SG).
	Indicates a frame ground (FG).
RTN	Indicates a return.

Symbol	Description
	Represents a connector. The connector and PIN Nos. are shown at the upper and lower parts respectively. "P,-" indicates the plug side of the connector. "J,>" indicates the jack side of the connector.
	Represents a connection terminal with a plate spring on the printed circuit board. The connector No. is indicated inside the box.
	Represents a connector directly connected to the printed circuit board. The connector No. is indicated inside the box.
	Represents a part. "PL X.Y.Z" indicates the item "Z" of the plate (PL) "X.Y" described in Chapter 5 "Parts List."
	Represents a functional part within a part, and indicates the name of the functional part.
◆	Indicates a reference item associated with the section.

7.2.2 Configuration of the Interconnection Wiring Diagram of Parts

§1 Option Duplex

Connections of HVPS/MCU with PWBA DUPLEX

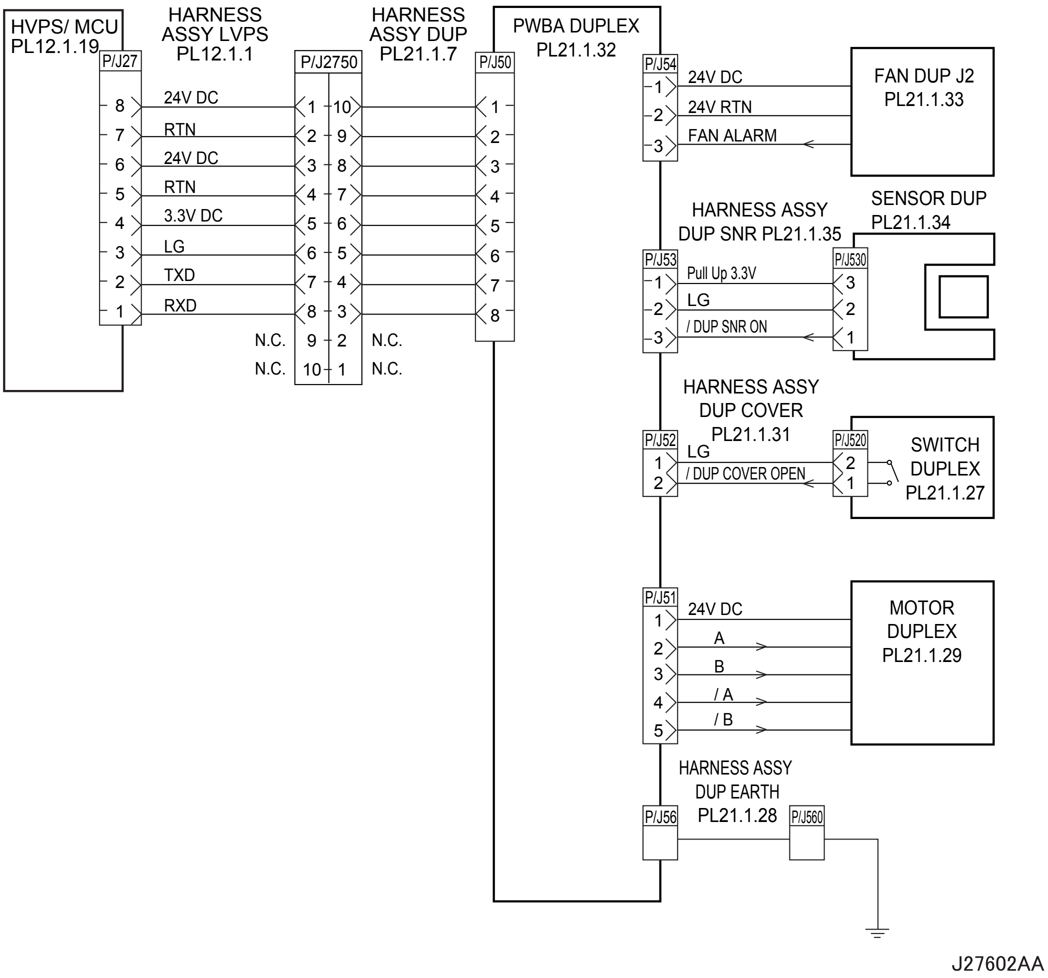
Connections of PWBA DUPLEX with FAN DUP J2

Connections of PWBA DUPLEX with SENSOR DUP

Connections of PWBA DUPLEX with SWITCH DUPLEX

Connections of PWBA DUPLEX with MOTOR DUPLEX

§ 1 Option Duplex


HVPS/ MCU
PL12.1.19
P/J27
HARNESS ASSY LVPS PL12.1.1
P/J2750
HARNESS ASSY DUP PL21.1.7
P/J50
PWBA DUPLEX PL21.1.32
24V DC
RTN
24V DC
RTN
3.3V DC
LG
TXD
RXD
N.C.
P/J54
24V DC
24V RTN
FAN ALARM
FAN DUP J2
PL21.1.33
HARNESS ASSY DUP SNR PL21.1.35
SENSOR DUP PL21.1.34
P/J53
P/J530
Pull Up 3.3V
LG
/ DUP SNR ON
HARNESS ASSY DUP COVER PL21.1.31
P/J52
P/J520
LG
/ DUP COVER OPEN
SWITCH DUPLEX PL21.1.27
P/J51
24V DC
A
B
/ A
/ B
MOTOR DUPLEX PL21.1.29
HARNESS ASSY DUP EARTH PL21.1.28
P/J56
P/J560
J27602AA

Signal line name	Description
FAN ALARM	Fan monitor signal. This signal goes High if there is a trouble with FAN DUP J2.
/DUP SNR ON	Signal from SENSOR DUP. This signal goes Low when light is received.
/DUP COVER OPEN	Signal from SWITCH DUPLEX. This signal goes Low when the cover of Duplex (COVER HSG DUP) is closed.
A and B	Excitation signal for MOTOR DUPLEX. Phases A and B.
/A and /B	Excitation signal for MOTOR DUPLEX. Phases /A and /B.

8. Machine Structure

8.1 Fundamental Structure

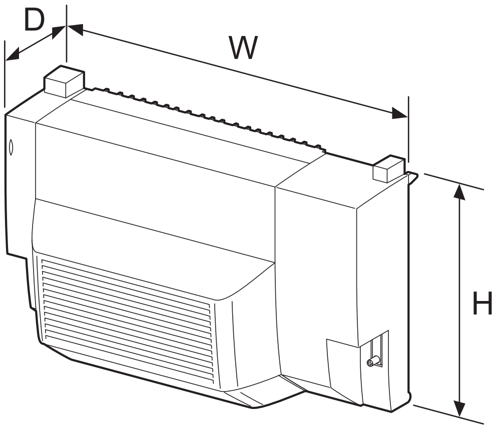
Option Duplex is used attaching in the back of the main part of a printer

8.2 Mechanical Characteristics

8.2.1 Dimensions/Mass of the Main Body

The dimensions are specified under the same posture as installed in the machine. Partial protrusions are not included.

Width (W):	351.7 mm
Depth (D):	146.2 mm
Height (H):	238.0 mm
Mass:	1.9 kg



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8.2.2 Printable Area

The print engine shall be capable of producing printed images meeting the Print Quality Spec to within 6 mm of the edge of the paper.

8.2.3 Paper

Feedable Paper Size

The minimum and maximum sizes of paper that can be fed by the machine are as follows:

Width:	88.9 mm (min) to 215.9 mm (max)
Length:	139.7 mm (min) to 355.6 mm (max)

Paper Size

The following table shows the paper sizes that can be set in paper feed section.
Every kind of paper is set in the SEF (Short Edge Feed) direction.

Type	Paper size (mm × mm)
LEGAL14"	215.9 × 355.6
LEGAL13"	215.9 × 330.2
LETTER	215.9 × 279.4

EXECTIVE	184.2 × 266.7
STATEMENT	139.7 × 215.9
A4	210.0 × 297.0
B5 (JIS)	182.0 × 257.0
B5 (ISO)	176.0 × 250.0
A5	148.0 × 210.0
A6	105.0 × 148.5
Official Postal Card	100.0 × 148.0
US Official Postal Card	88.9 × 139.7

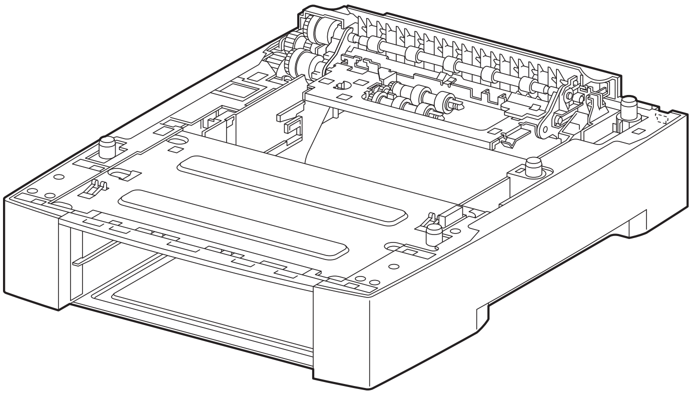
Paper Weight

64 to 216 g/m^2

Oki B7x0

Laser Printer

Option Feeder Technical Manual



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Version 1.0

Marks giving caution

Maintenance operations requiring special cautions or additional information to descriptions of this manual are presented as “Warning”, “Caution”, or “Note”, according to their nature.

WARNING

If instructions are not observed, death or serious injury may be caused.

CAUTION

If instructions are not observed, injuries of workers or physical damages to assets (including this laser printer) may result.

NOTE

Particularly important essentials for procedures, steps, rules, and others.

Safety

To prevent possible accidents during maintenance operation, you should observe strictly the “Warning” and “Caution” information in this manual.

Dangerous operations and operations out of range of this manual should be absolutely avoided.

Generally various processes not covered by this manual may be required in actual operation, which should be performed carefully always giving attention to safety.

Power source

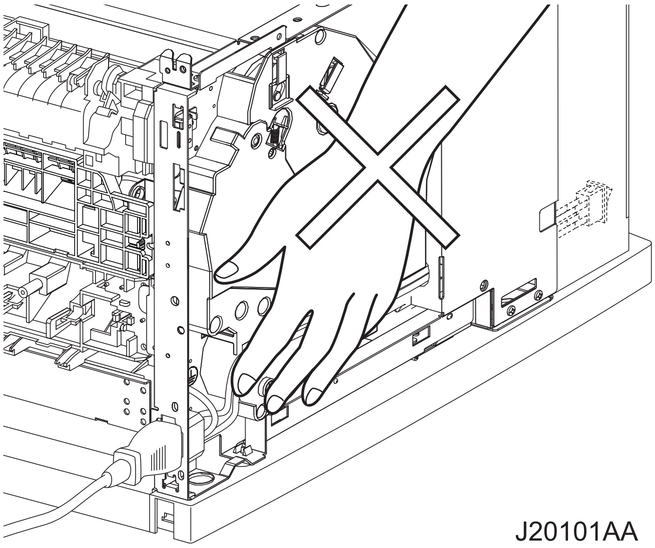
Keep the power supply of the printer connected with this unit off during maintenance operation to prevent electric shock, burns and other damages. Keep the power plug disconnected during the maintenance operation.

If the power supply should be kept connected for measurement of voltage or other similar reasons, sufficient care should be given to prevent electric shock, by following the procedures of this manual.

WARNING ***While the printer connected with this unit is ON, never touch live parts if not required absolutely.***

WARNING ***Power is supplied to the power switch / inlet (LVPS ASSY) even while the printer connected with this unit is off. Never touch its live components.***

WARNING ***Do not touch live parts of the printer connected with this unit unless otherwise specified.***



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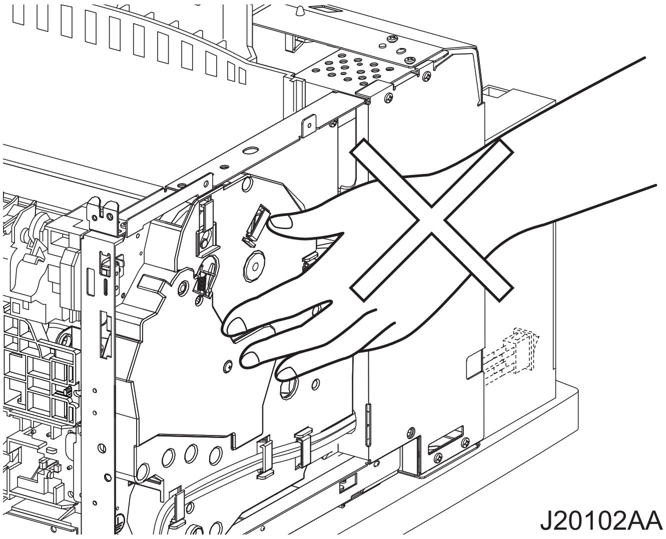
Driving units

When servicing gears or other driving units of the printer connected with this unit, be sure to turn them OFF and plug off. Drive them manually when required.

WARNING

Never touch the gears or other driving units while the printer is running.



Instlaserallation

Unpacking

CAUTION **The printer must be carried horizontally with two or more persons.**

CAUTION **Extreme care must be taken to avoid personal injuries.**

Unpacking Option 550 Paper Feeder

Unpack the carton, and confirm that the number of the Option 550 Paper Feeder and the attachments, and their appearances have no problem.

1) Option 550 Paper Feeder main unit
2) Option 550 Paper Cassette
3) JOINT FEEDER (four pieces)

Installation Procedures

For details, refer to the Instruction Manual supplied with the main unit.

CAUTION **When holding up the laser printer, be sure to grasp the handles with both hands. Grasping a part other than the handles result in fall or damage of the laser printer.**

CAUTION When lifting up the printer, bend your knees thoroughly to prevent lower back strain.

CAUTION The protection sheets and the fixing materials, which are removed before the installation, are re-used when the laser printer is moved to another place. Be sure to keep them.

1) Unpack the laser printer, and place it in an installation location after removing cushioning materials.
2) Confirm the attachments.
3) Peel off fixing tapes applied to the laser printer.
4) Unpack the EP CARTRIDGE, then be sure to shake it seven to eight times holding both sides.

NOTE **When removing the toner seal, draw it out straight and horizontally. After the removal, be careful not to shake or give a shock to the EP CARTRIDGE.**

5) Open the COVER OPEN, and install the EP CARTRIDGE.
6) Close the COVER OPEN.
7) Draw the paper tray, and press down the PLATE ASSY BTM to lock.
8) Place papers into the paper tray.

NOTE **When placing papers into the paper tray, be careful for the followings:**

- Align four corners of papers to place.

- Adjust the paper guide to the paper size.

- Do not place papers over the capacity or over the upper-limit line of the paper tray.

9) Push the paper tray into the laser printer to install.
10) Connect the power cord.

11) Turn on the power switch of the laser printer.
12) Try some test printings with each paper-feed trays to confirm that there is no problem.

Installing Option 550 Paper Feeder

For details, refer to the Instruction Manual supplied with the main unit or Chapter 3 RRP 20.1 Option 550 Paper Feeder.

CAUTION **Before the installation, turn off the power, plug off the power cord, and remove the paper tray from the laser printer.**

1) Unpack the Option 550 Paper Feeder, remove cushioning materials, and confirm the attachments.
2) Place the Option 550 Paper Feeder in an installation location.
3) Fit the holes on the bottom of the laser printer with the four positioning bosses of the Option 550 Paper Feeder, and place the laser printer on the Option 550 Paper Feeder.
4) Fix the laser printer and the Option 550 Paper Feeder securely with the JOINT FEEDERs (four pieces).
5) Push the paper tray into the laser printer completely to install.
6) Connect the power cord.
7) Turn on the power switch of the laser printer.
8) Try some test printings with the newly installed paper-feed tray to confirm that there is no problem.

Dismantlement Procedures

For details, refer to the Instruction Manual or Chapter 3 Removal and Replacement Procedures.
Perform the dismantlement in the reverse procedures of the installation.

CAUTION **When lifting the laser printer, be sure to grasp the handles with both hands. Grasping a part other than the handles results in fall or damage of the laser printer.**

CAUTION **When lifting the laser printer, bend your knees thoroughly to prevent lower back strain.**

NOTE **Be sure to remove the EP CARTRIDGE from the laser printer and put it into a plastic bag to dismantle.**

NOTE **Be sure to re-use the protection sheets and fixing materials, which are removed at the installation.**

NOTE **Confirm that no attachment is lacked.**

NOTE **Be sure to use the cushioning materials properly.**

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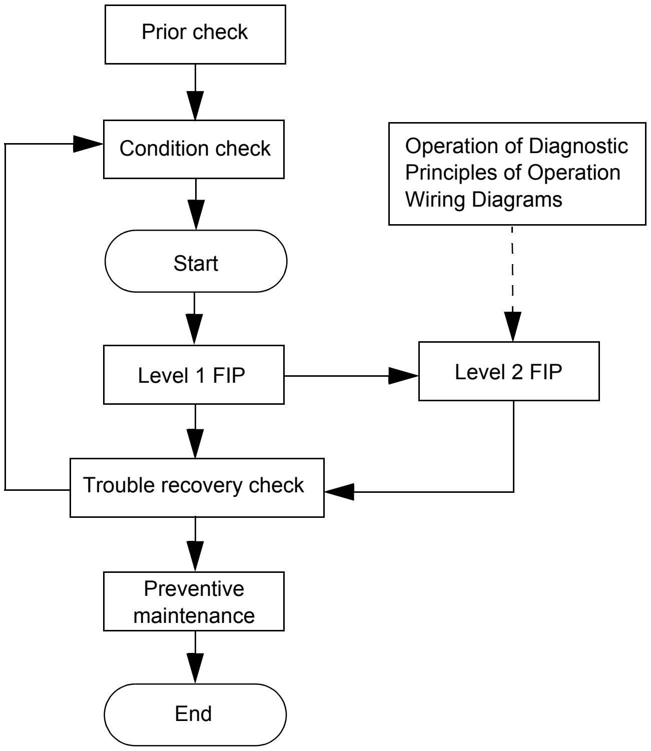
1. Troubleshooting

1.1 Progressing with the Troubleshooting

After making sure of actual condition of a trouble, proceed with the troubleshooting process efficiently making use of the Fault Isolation Procedure (FIP), Operation of Diagnostic (Chapter 2), Wiring Diagrams (Chapter 7), and Principles of Operation (Chapter 6).

1.1.1 Troubleshooting Flow

Flow of the troubleshooting is as follows:


Prior check
Condition check
Operation of Diagnostic
Principles of Operation
Wiring Diagrams
Start
Level 1 FIP
Level 2 FIP
Trouble recovery check
Preventive maintenance
End

1.1.2 Preparatory Requirements

Be sure to check the following items before starting the troubleshooting procedures:

1) Voltage of the power supply is within the specifications (measure the voltage at the electric outlet).

2) Power cord is free from breakage, short-circuit, disconnected wire, or incorrect connection in the power cord.

3) The laser printer is properly grounded.

4) The laser printer is not installed at a place subjected to too high temperature, too high humidity, too low temperature, too low humidity or rapid change of temperature.

5) The laser printer is not installed close to water service, humidifier, heat generating unit, or fire, in very dusty place, or a place exposed to air flow from the air conditioning system.

6) The laser printer is not installed in a place where volatile gas or inflammable gas is generated.

7) The laser printer is not installed under direct sunbeams.

8) The laser printer is installed in a well-ventilated place.

9) The laser printer is installed on a stout and stable plane.

10) Paper used meets specifications (standard paper is recommendable).

11) The laser printer is handled properly.

12) Parts which should be periodically replaced are replaced each time when specified number of sheets have been printed.

1.1.3 Cautions for Service Operations

1) Be sure to remove the power cord except when it is specifically required.

WARNING

If the printer is kept ON, never touch the conductive parts while it is not specifically required.

The power switch and inlet of LVPS is live even while the power supply is cut off. Never touch the live parts.

2) When checking some parts with covers of the printer removed and with the interlock and safety and power switches ON, remove the connector (P/J140) on the ROS ASSY except when it is specifically required.

WARNING

When checking some parts with covers of the printer removed and with the interlock and safety and power switches ON, laser beams may be irradiated from the ROS ASSY. Since it is dangerous, be sure to remove the connector (P/J140) while it is not required.

3) When using Diagnostic tools or other tools of high voltage, be sure to keep them covered except when otherwise specified.

WARNING

When using Diagnostic Tool or other tools of high voltage, never touch parts of high voltage.

When using Diagnostic Tool or other tools of high voltage, be sure to follow the procedure of this manual.

4) Workers should wear a wrist band or the like to remove static electricity from their body, grounding their body while working.

1.1.4 Cautions for FIP Use

1) It is assumed in the FIP that the printer controller (PWBA ESS) is normally functioning. If any trouble cannot be corrected by troubleshooting, replace the printer controller with a normal one and check for proper operation again.
   If the trouble is not still corrected, replace the major parts and then related parts in succession and confirm according to the procedure of the "Check".

2) When troubleshooting according to the FIP, normal HVPS/MCU, LVPS, FUSER ASSY, BTR ASSY and so no of the printer may be necessary for isolation of failed parts. Prepare them in advance.

3) In the initial check according to the FIP, check only items which can be simply checked.

4) In the initial check according to the FIP, check the constitutive parts of the major check parts and related parts, as well as major check parts.

5) When working with the printer, be sure to remove the power cord except when required specifically. Never touch live parts if not required, while the power cord is connected.

6) Connector condition is denoted as follows:
   [P/J12] → Connector (P/J12) is connected.
   [P12] → Plug side with the connector (P/J12) removed (except when attached directly to the board).
   [J12] → Jack side with the connector (P/J12) removed (except when attached directly to the board).

7) [P/J1-2PIN <=> P/J3-4PIN] in the FIP means measurement with the plus side of the measuring instrument connected to [2PIN] of [P/J1] and the minus side to [4PIN] of [P/J3].

8) [P/J1<=> P/J2] in the FIP means measurement for all terminals corresponding between [P/J1] and [P/J2] referring to "Wiring Diagrams".

9) In [P/J1-2PIN <=> P/J3-4PIN] in the FIP where voltage is measured, [P/J3-4PIN] on the rear minus side is always at the AG (analog ground), SG (signal ground), or RTN (return).
   Therefore, after checking of proper continuity between AGs, SGs, or RTNs respectively, the rear minus side can be connected to the PIN of AG, SG or RTN instead of [P/J3-4PIN].
   However, care should be taken not to mistake since [AG], [SG], and [RTN] are not on the same level.

10) Measure the voltage of small connectors with the special tool. Handle the tool with care, as the leading edge of the tool is pointed.

11) When measuring the voltage, set the EP CARTRIDGE, BRT ASSY and paper tray, close the COVER TOP ASSY, FUSER ASSY, and COVER REAR and power ON if not required specifically.

12) Numerical values in the FIP are only for standard. If numerical values are approximate, they should be considered permissible.

13) Parts which are always removed to check as indicated in the FIP and procedures for that purpose are not specifically referred to here. They should be handled carefully.

14) “Replacement” in the FIP indicates replacement of parts which are considered to be the source of trouble to be checked after replacing those parts, assemblies containing them (HIGH ASSY).

15) The FIP describes the first tray on the lower part of the device as “Tray 1,” and the second tray as “Tray 2”, and the first tray of Option 550 Paper Feeder as “Tray 3”, and the second tray as “Tray 4”.

16) In the FIP, existence and non-existence of Diagnostic tools (maintenance tools) are distinguished in some cases. Correct troubles according to the instructions in the FIP.

17) In the FIP, procedures are differentiated depending on specifications. Correct troubles according to the instructions in the FIP.

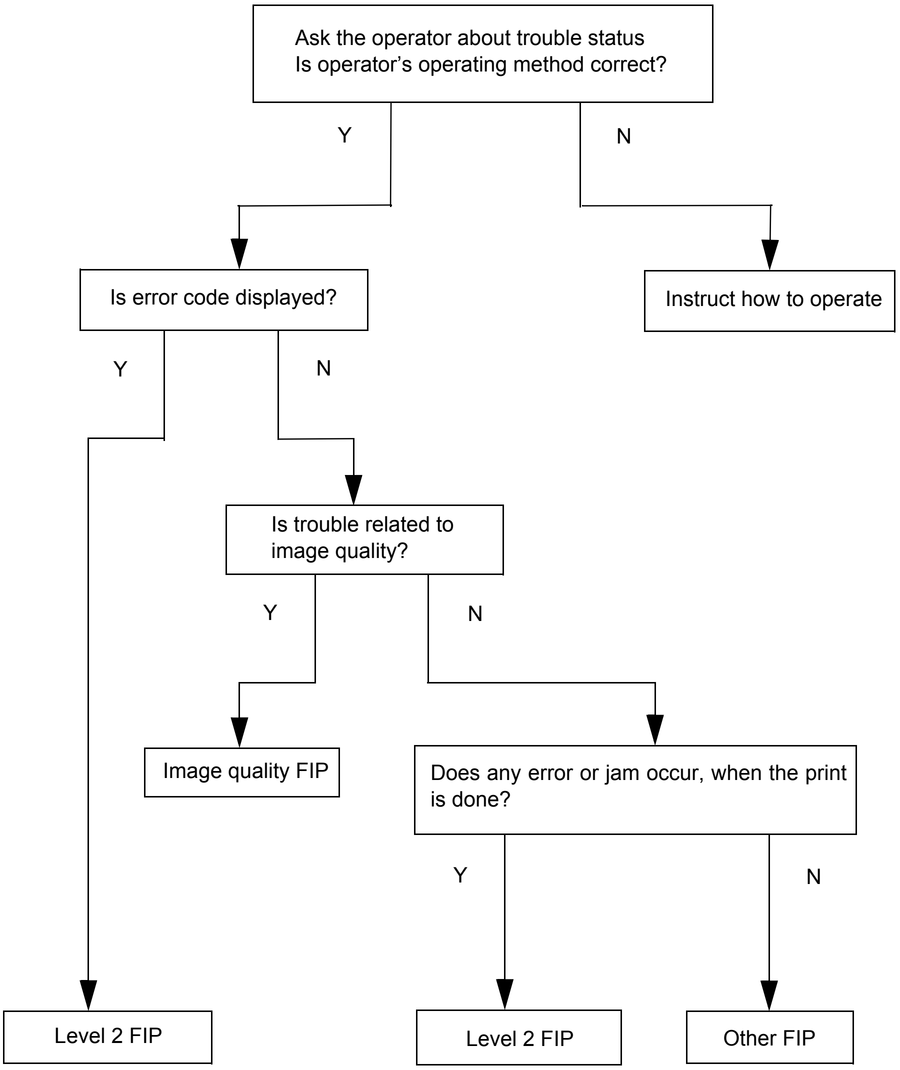
18) For the printer, some troubleshooting procedure may follow the manual of the printer, of which you should take note.
Keep the manual for the printer when required.

1.2 Level 1 FIP

1.2.1 Level 1 FIP

The level 1 FIP is the first step for trouble diagnosis. The level 1 FIP isolates the presence of various troubles including error codes, and the level 2 FIP provides a guide for proceeding of the troubleshooting.

1.2.2 Flow of Level 1 FIP


Ask the operator about trouble status
Is operator's operating method correct?
Y
N
Is error code displayed?
Instruct how to operate
Y
N
Is trouble related to image quality?
Y
N
Image quality FIP
Does any error or jam occur, when the print is done?
Y
N
Level 2 FIP
Level 2 FIP
Other FIP

1.2.3 Error/Status Code List

Status Code	Error Contents	Error Description	FIP to be referred
STATUS 1-5	Cassette Fail	- Paper size is not specified.	FIP1.22
STATUS 15-3	Near end of paper in Tray 4	- Remaining paper in Tray 4 became low.	FIP1.24
STATUS 15-4	Near end of paper in Tray 3	- Remaining paper in Tray 3 became low.	FIP1.24
STATUS 16-3	Option Tray Unit Fail	- Option Tray is not installed when Option Tray is selected.	FIP1.25
STATUS 17-4	Inappropriate Opt FDR	- Inappropriate Option Feeder (for example B6300 or B6500) is detected.	FIP1.33
STATUS 21-3	NO Paper in Tray 4	- No paper in Tray 4	FIP1.23
STATUS 21-4	NO Paper in Tray 3	- No paper in Tray 3	FIP1.23

1.3 Level 2 FIP

1.3.1 Level 2 FIP

The Level 2 FIP is the trouble diagnostic procedure to be sorted based on the symptoms of various troubles. In the troubleshooting, executing the steps given in the FIP or checking procedure allows you to find out a cause of trouble in a short time.

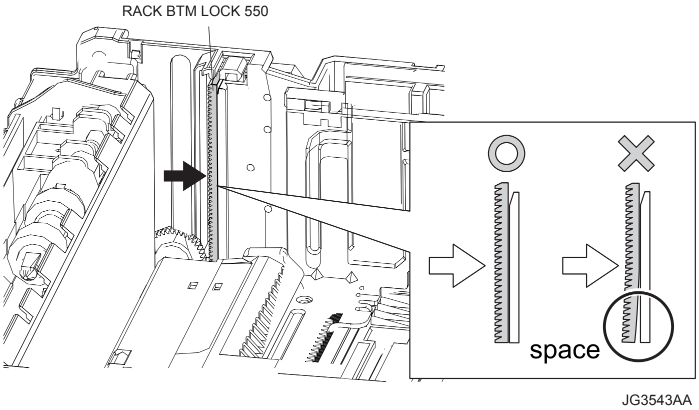
1.4 Error Code FIP

1.4.1 Level 1 FIP

FIP1.22 No Tray/Tray 3, 4

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) OPT ASSY SIZE (PL20.1.8) Option 550 Paper Feeder 550 PAPER CASSETTE (PL20.3.50)		
1	Does Error still occur, after removing and reinstalling the 550 PAPER CASSETTE of Option 550 Paper Feeder on Tray 3 or Tray 4?	Go to step 2.	End of work
2	Checking 550 PAPER CASSETTE Are GUIDE ASSY END, GEAR SECTOR, RACK SIZE and LINK SW SIZE1/2/3 of 550 PAPER CASSETTE of Tray 3 or Tray 4 installed correctly?	Go to FIP2.24 OPT ASSY SIZE.	Reinstall the parts causing Error.

FIP1.23 No Paper/Tray 3, 4

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) LVPS (PL12.1.5) SENSOR NO PAPER (PL20.2.33) ACTUATOR NO PAPER (PL20.2.6) Option 550 Paper Feeder 550 PAPER CASSETTE (PL20.3.50) PLATE ASSY BTM (PL20.3.10) RACK BTM LOCK 550 (PL20.3.21) HOUSING BASE 550(PL20.3.44)		
1	Checking if there is any paper Is there any paper in Tray 3 or Tray 4?	Go to step 2.	Supply paper.
2	Is PLATE ASSY BTM (PL20.3.10) lifted correctly?	Go to step 3.	Remove 550 PAPER CASSETTE, and then reinstall it correctly.
3	With pressing down PLATE ASSY BTM, press the center area of RACK BTM LOCK 550 against HOUSING BASE 550. Are RACK BTM LOCK 550 and HOUSING BASE 550 touched each other without any space? 	Go to step 4.	Work over the installation of RACK BTM LOCK 550 again.(RRP20.22)
4	Checking ACTUATOR NO PAPER for operation Remove 550 PAPER CASSETTE. When putting hand from the cassette insertion space of Tray 3 or Tray 4 to move ACTUATOR NO PAPER, does ACTUATOR NO PAPER move smoothly?	Go to step 5.	Replace ACTUATOR NO PAPER.
5	Checking SENSOR NO PAPER for operation Remove EP CARTRIDGE. When putting hand from the cassette insertion space of Tray 3 or Tray 4 to push and release ACTUATOR NO PAPER, does number of Sensor/Switch Check increase by one? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.22 SENSOR NO PAPER.

FIP1.24 Low Paper in Tray/Tray 3, 4

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) LVPS (PL12.1.5) SENSOR LOW PAPER (PL20.1.30) ACTUATOR LOW PAPER (PL20.1.31) PLATE ASSY BTM (PL20.3.10) Option 550 Paper Feeder 550 PAPER CASSETTE (PL20.3.50)		
1	Checking the sensor for operation Does Error still occur, after 550 PAPER CASSETTE filled with a specified amount of paper is inserted into Tray 3 or Tray 4?	Go to step 2.	End of work
2	Checking ACTUATOR LOW PAPER for function Remove 550 PAPER CASSETTE. Does ACTUATOR LOW PAPER move smoothly, when moving ACTUATOR LOW PAPER up and down? Does ACTUATOR LOW PAPER go into the sensor part of SENSOR LOW PAPER, when the flag is pushed up? Does ACTUATOR LOW PAPER go out of the sensor part of SENSOR LOW PAPER, when the flag is released?	Go to step 3.	Replace ACTUATOR LOW PAPER.
3	Checking PLATE ASSY BTM for operation Does PLATE ASSY BTM move ACTUATOR LOW PAPER normally, when PLATE ASSY BTM is pushed or released?	Go to FIP2.23 SENSOR LOW PAPER.	Replace PLATE ASSY BTM. (RRP20.21)

FIP1.25 No Recognition of Option 550 Paper Feeder

The description below is on the assumption that Option 550 Paper Feeder's are installed to Tray 3 and Tray 4.

Step	Check	Yes	No
	Possible causative parts: LVPS (PL12.1.5) HVPS/MCU (PL12.1.19) PWBA FEEDER 550 (PL20.1.34) HARNESS ASSY FDR2 (PL20.1.5) HARNESS ASSY FDR5 (PL20.1.26)		
1	Checking HARNESS ASSY FDR2 of Feeder equivalent to Tray 3 for continuity Remove Option 550 Paper Feeder. Disconnect P/J2083. Is the following each continuous? J2083-1 <=> J83-10 J2083-2 <=> J83-9 J2083-3 <=> J83-8 J2083-4 <=> J83-7 J2083-5 <=> J83-6	Go to FIP2.20, 21 PWBA FEEDER 550. Go to step 2, when Tray 4 is not recognized.	Replace HARNESS ASSY FDR2.
2	Checking HARNESS ASSY FDR5 of Feeder equivalent to Tray 3 for continuity Remove Option 550 Paper Feeder. Disconnect P/J84 from PWBA FEEDER 550. Is the following each continuous? J84-1 <=> J8483-10 J84-2 <=> J8483-9 J84-3 <=> J8483-8 J84-4 <=> J8483-7 J84-5 <=> J8483-6	Go to step 3.	Replace HARNESS ASSY FDR5.
3	Checking HARNESS ASSY FDR2 of Feeder equivalent to Tray 4 for continuity Remove Option 550 Paper Feeder. Disconnect P/J8483. Is the following each continuous? - J8483-1 <=> J83-10 - J8483-2 <=> J83-9 - J8483-3 <=> J83-8 - J8483-4 <=> J83-7 - J8483-5 <=> J83-6	Go to FIP2.20, 21 PWBA FEEDER 550.	Replace HARNESS ASSY FDR2.

FIP1.33 Inappropriate Option 550 Paper Feeder

Step	Check	Yes	No
	Possible causative parts: PWBA FEEDER 550 (PL20.1.34)		
1	Checking Option 550 Paper Feeder Is Option 550 Paper Feeder for correct JIGEN3 installed?	Go to FIP2.20, 21 PWBA FEEDER 550.	Replace Option 550 Paper Feeder for correct JIGEN3.

FIP2.20 PWBA FEEDER 550 (PL20.1.34)

It is stated here as Option 550 Paper Feeder is set as Tray 3. When it is set as Tray 4, refer to the statement in FIP2.21 PWBA FEEDER 550 for the circuit usage condition.

Step	Check	Yes	No
	Possible causative parts: HARNESS ASSY FDR2 (PL12.1.21) PWBA FEEDER 550 (PL20.1.34) HARNESS ASSY FDR2 (PL20.1.5) HVPS/MCU (PL12.1.19)		
1	Checking HARNESS ASSY FDR2 (Feeder) for continuity Remove HARNESS ASSY FDR2. Is J2083 <=> J83 continuous normally?	Go to step 2.	Replace HARNESS ASSY FDR2.
2	Checking HARNESS ASSY FDR2 (Engine) for continuity Remove HARNESS ASSY FDR2. Is HARNESS ASSY FDR1 continuous normally?	Go to step 3.	Replace HARNESS ASSY FDR2.
3	Checking PWBA FEEDER 550 Replace PWBA FEEDER 550. (RRP20.8) Does the problem still occur, after replacement?	End of work	Replace HVPS/MCU. (RRP12.10)

FIP2.21 PWBA FEEDER 550 (PL20.1.34)

It is stated here as Option 550 Paper Feeder is set as Tray 4. When it is set as Tray 3, refer to the statement in FIP2.20 PWBA FEEDER 550 for the circuit usage condition.

Step	Check	Yes	No
	Possible causative parts: PWBA FEEDER 550 (PL20.1.34) HARNESS ASSY FDR5 (PL20.1.26) HARNESS ASSY FDR2 (PL20.1.5) HVPS/MCU (PL12.1.19)		
1	Checking HARNESS ASSY FDR2 for continuity Remove HARNESS ASSY FDR2. Is J2083 <=> J83 continuous normally?	Go to step 2.	Replace HARNESS ASSY FDR2.
2	Checking HARNESS ASSY FDR5 for continuity Remove HARNESS ASSY FDR5. Is J84 <=> J8483 continuous normally?	Go to step 3.	Replace HARNESS ASSY FDR5.
3	Checking PWBA FEEDER 550 Replace PWBA FEEDER 550. (RRP20.8) Does the problem still occur, after replacement?	End of work	Replace HVPS/MCU. (RRP12.10)

FIP2.22 SENSOR NO PAPER (PL20.2.33)

Step	Check	Yes	No
	Possible causative parts: SENSOR NO PAPER (PL20.2.33) ACTUATOR NO PAPER (PL20.2.6) HARNESS ASSY CLSNR1 (PL20.2.31) HARNESS ASSY CLSNR2 (PL20.1.36) 550 PAPER CASSETTE (PL20.3.50) Option 550 Paper Feeder PWBA FEEDER 550 (PL20.1.34) HVPS/MCU (PL12.1.19)		
1	Checking ACTUATOR NO PAPER Remove Option 550 Paper Feeder. (RRP20.1) Install 550 PAPER CASSETTE. Move ACTUATOR NO PAPER with a finger. Does ACTUATOR NO PAPER operate smoothly? Does the flag go into the detecting area of the sensor when the paper is set, and out of the detecting area when there is no paper?	With tool Go to step 2. Without tool Go to step 3.	Replace ACTUATOR NO PAPER.
2	Checking SENSOR NO PAPER (1) Install Option 550 Paper Feeder. (RRP20.1) Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Remove 550 PAPER CASSETTE. Put the hand in the cassette insertion space, move ACTUATOR NO PAPER. Does the number increase one by one, as ACTUATOR NO PAPER operates? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to step 3.
3	Checking SENSOR NO PAPER (2) Install Option 550 Paper Feeder. (RRP20.1) Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Remove 550 PAPER CASSETTE. Put the hand in the cassette insertion space, move ACTUATOR NO PAPER. Is the voltage across P/J85-7 <=> P/J85-6, 0 VDC when ACTUATOR NO PAPER is held up, and 3.3 VDC when released?	Go to FIP2.20, 21 PWBA FEEDER 550.	Go to step 4.
4	Checking HARNESS ASSY CLSNR1 for continuity Remove HARNESS ASSY CLSNR1. Are the following continuous normally? J855-5 <=> J852-3 J855-6 <=> J852-2 J855-7 <=> J852-1	Go to step 5.	Replace HARNESS ASSY CLSNR1.

Step	Check	Yes	No
5	Checking HARNESS ASSY CLSNR2 for continuity Disconnect connector P/J85 from PWBA FEEDER 550. Are the following continuous normally? J85-5 <=> J855-3 J85-6 <=> J855-2 J85-7 <=> J855-1	Go to step 6.	Replace HARNESS ASSY CLSNR2.
6	Checking HVPS/MCU for continuity Disconnect P/J11 and P/J20 from HVPS/MCU. Is P11-16 <=> P20-5 continuous normally?	Go to step 7.	Replace HVPS/MCU. (RRP12.10)
7	Checking after replacing SENSOR NO PAPER (3) Replace SENSOR NO PAPER. (RRP20.16) Does the problem still occur, after replacement?	Replace HVPS/MCU. (RRP12.10)	End of work

FIP2.23 SENSOR LOW PAPER (PL20.1.30)

Step	Check	Yes	No
	Possible causative parts: SENSOR LOW PAPER (PL20.1.30) ACTUATOR LOW PAPER (PL20.1.31) HARNESS LOW PAPER (PL20.1.33) HARNESS ASSY FDR2 (PL20.1.5) Option 550 Paper Feeder 550 PAPER CASSETTE PWBA FEEDER 550 (PL20.1.34) PLATE ASSY BTM (PL20.3.10) HVPS/MCU (PL12.1.19)		
1	Checking ACTUATOR LOW PAPER Remove Option 550 Paper Feeder. (RRP20.1) Install 550 PAPER CASSETTE. Move PLATE ASSY BTM up and down. Does ACTUATOR LOW PAPER operate smoothly? Does the flag go into the detecting area of the sensor when PLATE ASSY BTM is up state (ACTUATOR LOW PAPER is pushed up), and out of the detecting area when PLATE ASSY BTM is pressed down?	With tool Go to step 2. Without tool Go to step 3.	Replace ACTUATOR LOW PAPER.
2	Checking SENSOR LOW PAPER (1) Install Option 550 Paper Feeder. (RRP20.1) Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Remove 550 PAPER CASSETTE. Put the hand in the cassette insertion space, move ACTUATOR LOW PAPER. Does the number increase one by one, as ACTUATOR LOW PAPER operate? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to step 3.
3	Checking SENSOR LOW PAPER (2) Install Option 550 Paper Feeder. (RRP20.1) Remove EP CARTRIDGE. Close COVER OPEN (PL1.1.2). Remove 550 PAPER CASSETTE. Put the hand in the cassette insertions pace, move ACTUATOR LOW PAPER. Is the voltage across P/J81-3 <=> P/J81-2, 3.3 VDC when ACTUATOR LOW PAPER is held up, and 0 VDC when released?	Go to FIP2.20, 21 PWBA FEEDER 550.	Go to step 4.
4	Checking HARNESS LOW PAPER for continuity Install Option 550 Paper Feeder. (RRP7.1) Disconnect the connector of SENSOR LOW PAPER. Disconnect P/J81 from PWBA FEEDER 550. Is J81 <=> J810 continuous normally?	Go to step 5.	Replace HARNESS LOW PAPER.
5	Checking HVPS/MCU for continuity Disconnect P/J11 and P/J20 from HVPS/MCU. Is P11-16 <=> P20-5 continuous normally?	Go to step 6.	Replace HVPS/MCU. (RRP12.10)
6	Checking SENSOR LOW PAPER (3) Replace SENSOR LOW PAPER. (RRP20. 7) Does the problem still occur, after replacement?	Replace HVPS/MCU. (RRP12.10)	End of work

FIP2.24 OPT ASSY SIZE (PL20.1.18)

Step	Check	Yes	No
	Possible causative parts: OPT ASSY SIZE (PL20.1.18) HARNESS ASSY SIZE FDR1 (PL20.1.19) HARNESS ASSY SIZE FDR2 (PL20.1.35) Option 550 Paper Feeder 550 PAPER CASSETTE PWBA FEEDER 550 (PL20.1.34) HVPS/MCU (PL12.1.19)		
1	Checking HARNESS ASSY SIZE FDR1 for continuity Remove HARNESS ASSY SIZE FDR1. Is each cable between J801 <=> J802 continuous?	Go to step 2.	Replace HARNESS ASSY SIZE FDR1.
2	Checking HARNESS ASSY SIZE FDR2 for continuity Disconnect P/J80 from PWBA FEEDER 550. Disconnect P/J801. Is each cable between J80 <=> J801 continuous?	Go to step 3.	Replace HARNESS ASSY SIZE FDR2.
3	Checking OPT ASSY SIZE Is the harness of OPT ASSY SIZE continuous?	Go to FIP2.20,21 PWBA FEEDER 550.	Replace OPT ASSY SIZE. (RRP20.4)

FIP2.25 CLUTCH ASSY PH (PL20.2.21)

Step	Check	Yes	No
	Possible causative parts: CLUTCH ASSY PH (PL20.2.21) Option 550 Paper Feeder 550 PAPER CASSETTE (PL20.3.50) PWBA FEEDER 550 (PL20.1.34) HARNESS ASSY CLSNR1 (PL20.2.31) HARNESS ASSY CLSNR2 (PL20.1.36) HARNESS ASSY FDR2 (PL20.1.5) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5) HARNESS ASSY FDR2 (PL12.1.21)		
1	Checking HARNESS ASSY CLSNR1 for continuity Disconnect P/J855. Disconnect P/J853. Is each cable between J855 <=> J853 continuous?	Go to step 2.	Replace HARNESS ASSY CLSNR1.
2	Checking HARNESS ASSY CLSNR2 for continuity Disconnect P/J85 from PWBA FEEDER 550. Disconnect P/J855. Is each cable between J85 <=> J855 continuous?	Go to step 3.	Replace HARNESS ASSY CLSNR2.
3	Checking the resistance of CLUTCH ASSY PH Is the resistance of the wirewound resistor between P/J853-1 <=> P/J853-2 of CLUTCH ASSY PH, 172 ohm +/-10% (at 20 °C)?	Go to step 4.	Replace CLUTCH ASSY PH. (RRP20.14)
4	Checking PWBA FEEDER 550 for continuity Disconnect P/J83 from PWBA FEEDER 550. Are the following continuous normally? P83-1 <=> P85-1	Go to step 5.	Replace PWBA FEEDER 550. (RRP20.8)
5	Checking HARNESS ASSY FDR2 (Feeder) for continuity Remove HARNESS ASSY FDR2. Is J2083 <=> J83 continuous normally?	Go to step 6.	Replace HARNESS ASSY FDR2.
6	Checking HARNESS ASSY FDR2 (Engine) for continuity Remove HARNESS ASSY FDR2. Is J20 <=> J2083 continuous normally?	Go to step 7.	Replace HARNESS ASSY FDR2.
7	Checking the power to CLUTCH ASSY PH Remove EP CARTRIDGE. Is the voltage across P20-10 <=> P20-9 on HVPS/MCU, 24 VDC?	Replace CLUTCH ASSY PH. (RRP20.14)	Go to step 8.
8	Checking HVPS/MCU for continuity Disconnect P/J10 from HVPS/MCU. Is P10-1 <=> P20-10 continuous normally?	Go to FIP2.1 LVPS.	Replace HVPS/MCU. (RRP12.10)

FIP2.26 CLUTCH PR-REGI (PL20.2.22)

Step	Check	Yes	No
	Possible causative parts: CLUTCH PR-REGI (PL20.2.22) Option 550 Paper Feeder 550 PAPER CASSETTE (PL20.3.50) PWBA FEEDER 550 (PL20.1.34) HARNESS ASSY CLSNR1 (PL20.2.31) HARNESS ASSY CLSNR2 (PL20.1.36) HARNESS ASSY FDR2 (PL20.1.5) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5) HARNESS ASSY FDR2 (PL12.1.21)		
1	Checking HARNESS ASSY CLSNR1 for continuity Disconnect P/J855. Disconnect P/J854. Is each cable between J855 <=> J854 continuous?	Go to step 2.	Replace HARNESS ASSY CLSNR1.
2	Checking HARNESS ASSY CLSNR2 for continuity Disconnect P/J85 from PWBA FEEDER 550. Disconnect P/J855. Is each cable between J85 <=> J855 continuous?	Go to step 3.	Replace HARNESS ASSY CLSNR2.
3	Checking the resistance of CLUTCH PR-REGI Is the resistance of the wirewound resistor between P/J854-1 <=> P/J854-2 of CLUTCH PR-REGI, 172 ohm +/-10% (at 20 °C)?	Go to step 4.	Replace CLUTCH PR-REGI. (RRP20.15)
4	Checking PWBA FEEDER 550 for continuity Disconnect P/J83 from PWBA FEEDER 550. Are the following continuous normally? P83-3 <=> P85-3	Go to step 5.	Replace PWBA FEEDER 550. (RRP20.8)
5	Checking HARNESS ASSY FDR2 (Feeder) for continuity Remove HARNESS ASSY FDR2. Is J2083 <=> J83 continuous normally?	Go to step 6.	Replace HARNESS ASSY FDR2.
6	Checking HARNESS ASSY FDR2 (Engine) for continuity Remove HARNESS ASSY FDR2. Is J20 <=> J2083 continuous normally?	Go to step 7.	Replace HARNESS ASSY FDR2.
7	Checking the power to CLUTCH PR-REGI Remove EP CARTRIDGE. Is the voltage across P20-10 <=> P20-9 on HVPS/MCU, 24 VDC?	Replace CLUTCH PR-REGI. (RRP20.15)	Go to step 8.
8	Checking HVPS/MCU for continuity Disconnect P/J10 from HVPS/MCU. Is P10-1 <=> P20-10 continuous normally?	Go to FIP2.1 LVPS.	Replace HVPS/MCU. (RRP12.10)

1.5 Preventive maintenance

When visiting the customer, perform the maintenance work other than the original purpose to avoid any trouble that may arise.

Procedure for preventive maintenance

1) Check how the customer is using the machine.
2) Write down the cumulative print count.

NOTE **Use the cumulative print count as a guide of replacing periodic replacement parts. Replace the periodic replacement parts as required.**

3) Print several piece of paper to check no problem.
4) Remove foreign articles on BTR ASSY, FUSER ASSY and paper transfer rolls, and clean stains with a brush and dry waste cloth.

NOTE **When stains is heavy, clean with dampened cloth, and then clean with dry cloth. Be careful not to damage the parts to be cleaned.**

5) Cleaning the fan exhaust
   Remove COVER REAR, and clean the dust on MAIN FAN with a brush.
   Remove COVER FRONT, and clean the dust on FAN SUB.

NOTE **The clogged exhaust and fan cause a temperature rise inside and failures.**

6) Print several piece of paper again to check no problem.

2. Diagnostics

2.1 Using Diagnostics

Please see the main Service Manual for description of using the printer’s built in diagnostic menu.

3. Removal and Replacement Procedures

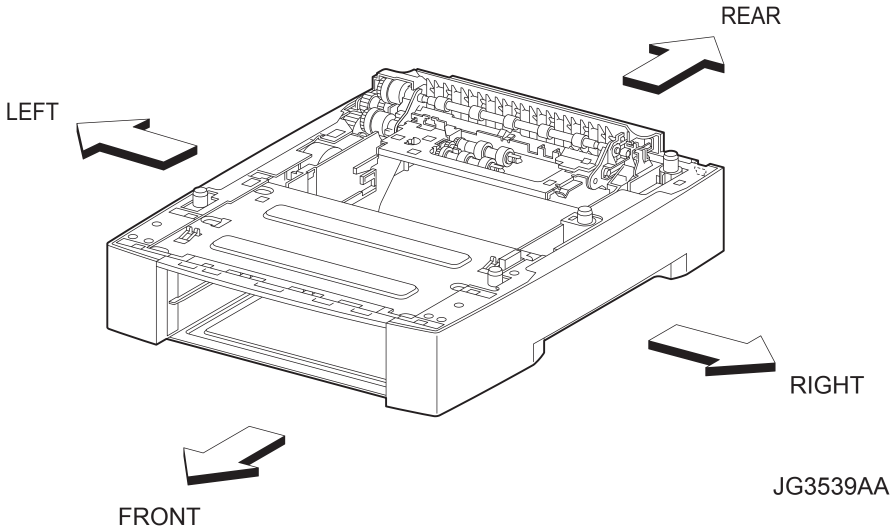
Parts removal and replacement procedures of the Option 550 Paper Feeder is described here.

3.1 Before starting service work

- Turn the power OFF and remove the power cord from the electric outlet.
- Do not give forcible power to prevent damage of parts or functions.
- Since a wide variety of screws are used, be careful not to mistake their positions, to prevent crushing of the screw holes or other troubles.
- Wear a wrist band or the like as far as possible to remove static electricity of the human body.
- Remove the 550 PAPER CASSETTE, and place it where the service is not disturbed.

3.2 Description of procedures

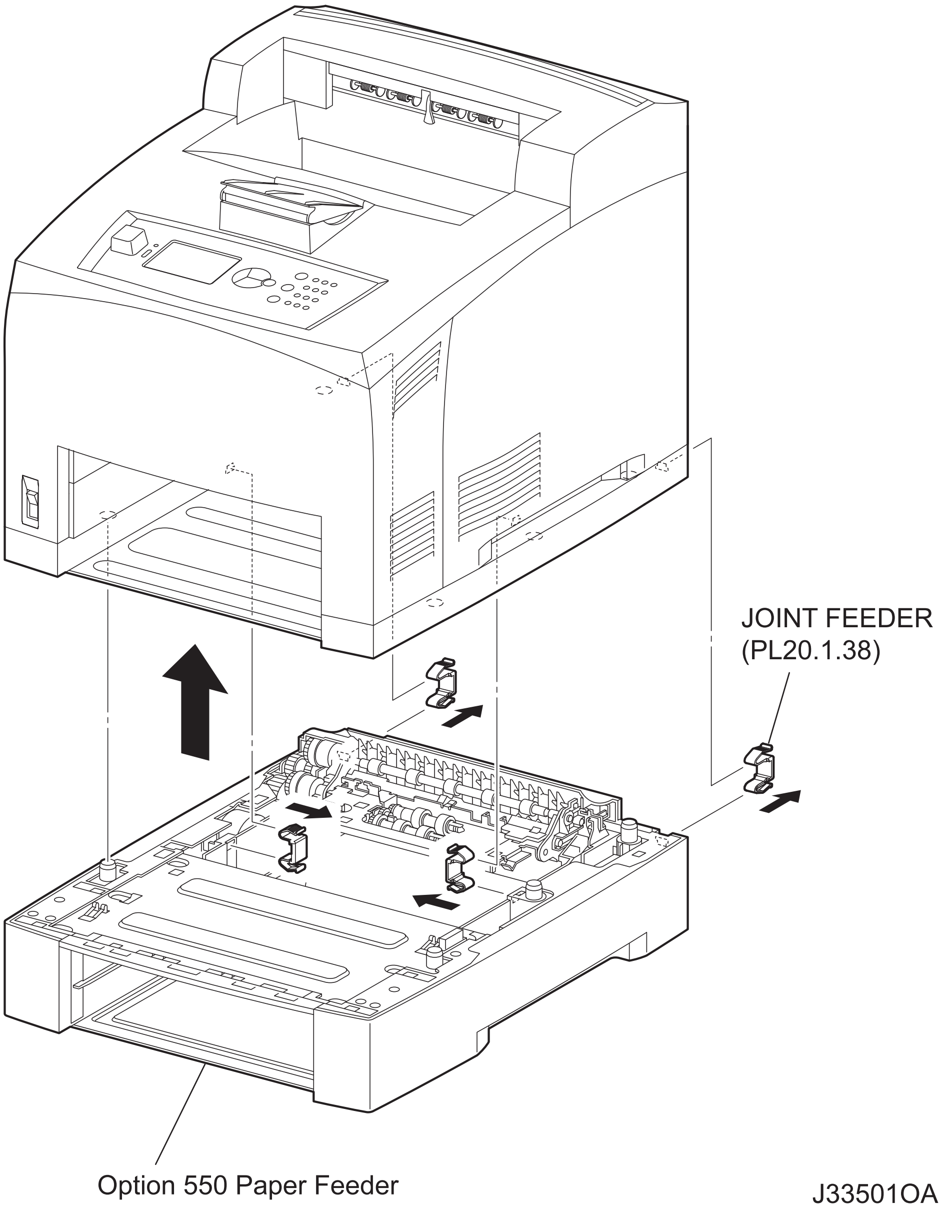
- "RRP X,Y "AAAAA" at the top of procedures represent the part name AAAAA are to be removed and replaced.
- "(PL X.Y.Z)" following the parts name in procedures represent that the parts are those of the plate (PL) "X.Y", item "Z" in Chapter 5, Parts List. Their forms, replacing position or other conditions can be seen in Chapter 5, Parts List.
- In the procedures, directions are represented as follows.
  - Front: Front when you are facing the front of this Option 550 Paper Feeder.
  - Rear: Inner direction when you are facing the front of this Option 550 Paper Feeder.
  - Left: Left hand when you are facing the front of this Option 550 Paper Feeder.
  - Right: Right hand when you are facing the front of this Option 550 Paper Feeder.



- The screws in procedures are expressed with their replacing position, color, characteristics and nominal length, etc.
- "RRP X.Y" in the midst or at the end of sentences in the procedures indicate that work procedures related with the "RRP X.Y" are described.
- "Figure X.Y" at the end of the sentences of procedures indicate that illustrations instructive for the "RRP X.Y" are included.
- "Z)" in the illustrations correspond to "Z)" of the service procedures.
- The screws in the illustrations should be removed using a plus (+) screwdriver unless otherwise specified.
- A black arrow in the illustrations indicate movement in the arrow mark direction.
  Numbered black arrows indicate movement in the order of the numbers.
- White arrows (FRONT) in the illustrations indicate the front direction.
- For the positions of the connectors (P/J), refer to Chapter 7, Electric wiring.

RRP20.Option 550 Paper Feeder

RRP20.1 Option 550 Paper Feeder


JOINT FEEDER
(PL20.1.38)
Option 550 Paper Feeder
J33501OA

Removal

1) Remove the EP CARTRIDGE.
2) Pull out the 250 PAPER CASSETTE or 550 PAPER CASSETTE from the 2nd tray of the printer.
3) Remove the 550 PAPER CASSETTE from the Option 550 Paper Feeder.
4) Remove 2 JOINT FEEDERs (PL20.1.38) at the rear of the printer securing the printer and the Option 550 Paper Feeder.
5) Remove 2 JOINT FEEDERs inside the tray insertion space.
6) Lift and remove the printer from the Option 550 Paper Feeder, and put it aside.

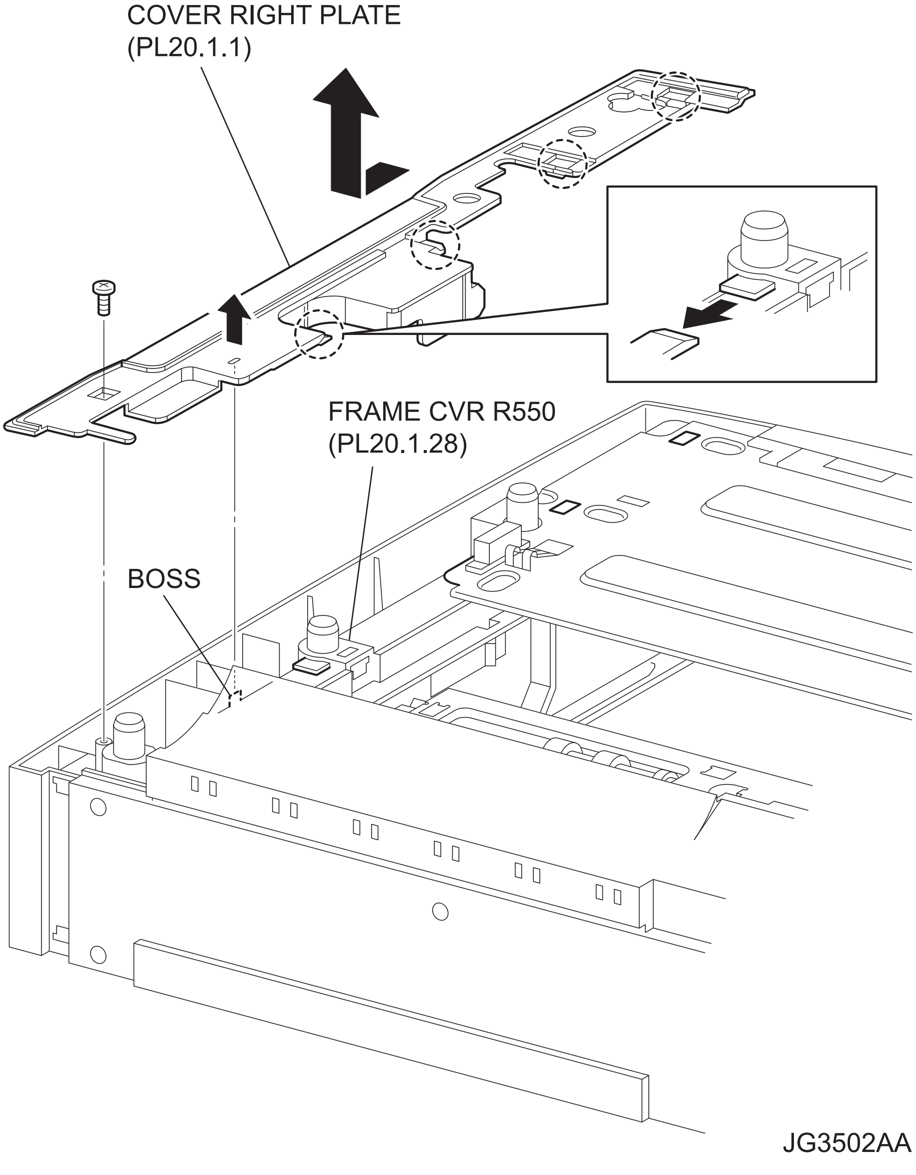
Replacement

1) Install the printer on the Option 550 Paper Feeder.

NOTE **When installing, align the holes and the bosses of the printer and Option 550 Paper Feeder, and fix them using 4 JOINT FEEDERs firmly.**

2) Secure the printer and Option 550 Paper Feeder using 2 JOINT FEEDERs (PL20.1.38) inside the tray insertion space.
3) INstall 2 JOINT FEEDERs at the rear of the printer.
4) Set the 550 PAPER CASSETTE to the Option 550 Paper Feeder.
5) Set the 250 PAPER CASSETTE or 550 PAPER CASSETTE to the 2nd tray of the printer.
6) Install the EP CARTRIDGE.

RRP20.2 COVER RIGHT PLATE (PL20.1.1)


COVER RIGHT PLATE
(PL20.1.1)
FRAME CVR R550
(PL20.1.28)
BOSS
JG3502AA

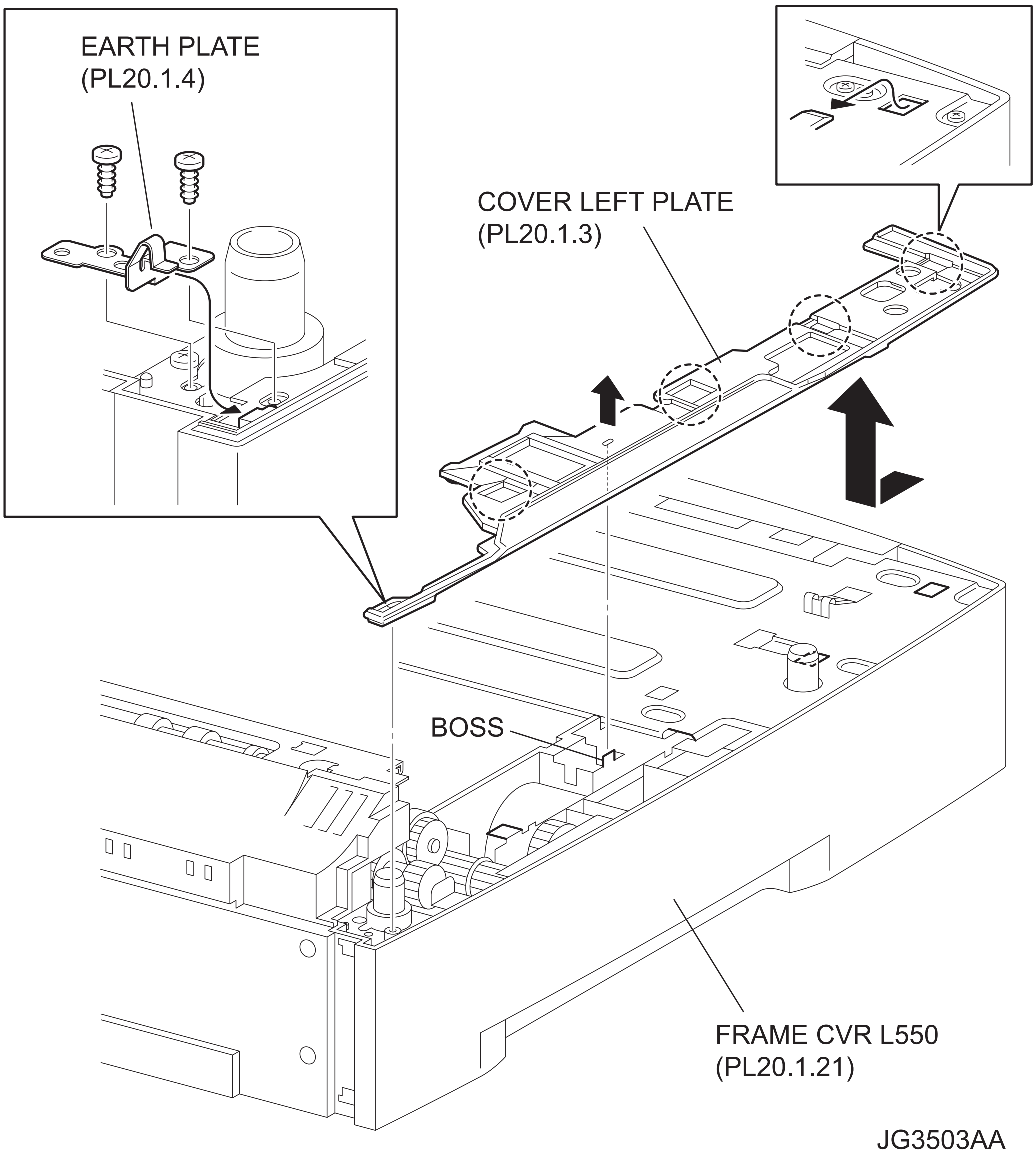
Removal

1) Remove the screw (gold tapping, 8mm) securing the COVER RIGHT PLATE to the frame.
2) Lift up the COVER RIGHT PLATE just above the boss of the FRAME CVR R550 (PL20.1.28) a little to release the lock of them.
3) Shift the COVER RIGHT PLATE in the direction of the arrow to release the 4 hooks of the FRAME CVR R550, and remove the COVER RIGHT PLATE from the Option 550 Paper Feeder.

Replacement

1) Shift the COVER RIGHT PLATE in the opposite direction of the arrow to engage the 4 hooks of the FRAME CVR R550 (PL20.1.28) with the COVER RIGHT PLATE.
2) Put the boss of the FRAME CVR R550 into the hole of the COVER RIGHT PLATE.
3) Secure the COVER RIGHT PLATE to the frame using the screw (gold tapping, 8mm).

RRP20.3 COVER LEFT PLATE (PL20.1.3)


EARTH PLATE
(PL20.1.4)
COVER LEFT PLATE
(PL20.1.3)
BOSS
FRAME CVR L550
(PL20.1.21)
JG3503AA

Removal

1) Remove the 2 screws (gold tapping, 8mm) securing the EARTH PLATE (PL20.1.4) to the frame.
2) Remove the EARTH PLATE.
3) Lift up the COVER LEFT PLATE just above the boss of the FRAME CVR L550 (PL20.1.21) a little to release the lock of them.
4) Shift the COVER LEFT PLATE in the direction of the arrow to release the 4 hooks of the FRAME CVR L550, and remove the COVER LEFT PLATE from the Option 550 Paper Feeder.

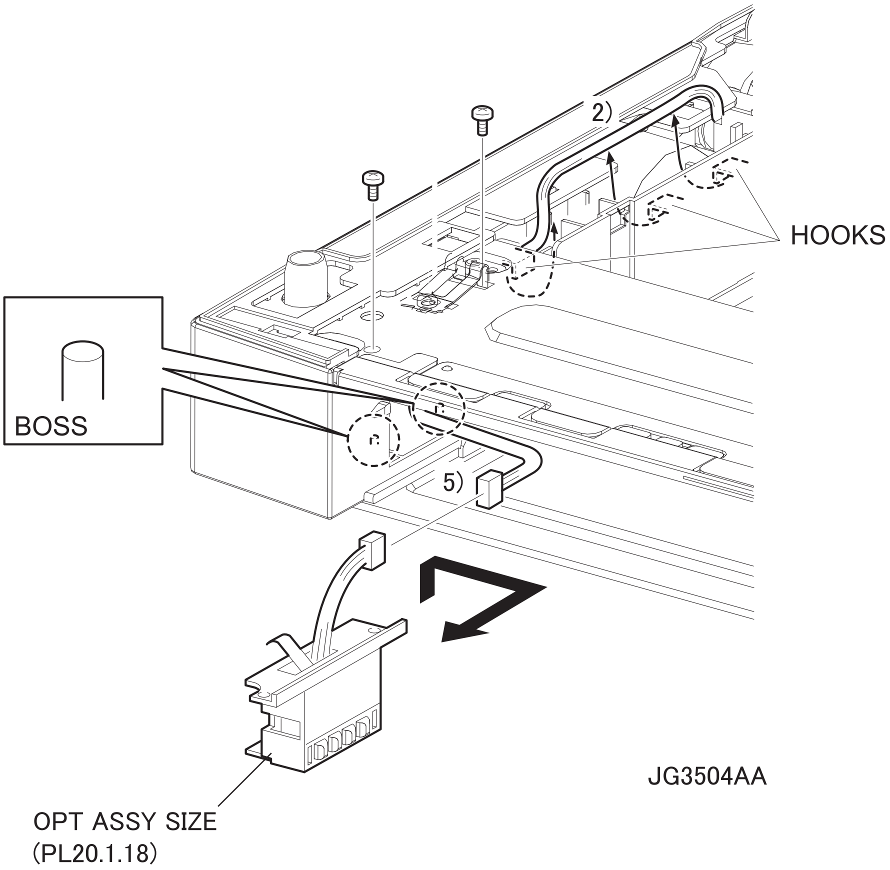
Replacement

1) Shift the COVER LEFT PLATE in the opposite direction of the arrow to engage the 4 hooks of the FRAME CVR L550 (PL20.1.21) with the COVER LEFT PLATE.
2) Put the boss of the FRAME CVR L550 into the hole of the COVER LEFT PLATE.
3) Secure the EARTH PLATE (PL20.1.4) to the frame using the 2 screws (gold tapping, 8mm).

NOTE

When installing the EARTH PLATE, be sure to install the tip of the EARTH PLATE under the COVER LEFT PLATE.

RRP20.4 OPT ASSY SIZE (PL20.1.18)


2)
HOOKS
BOSS
5)
JG3504AA
OPT ASSY SIZE
(PL20.1.18)

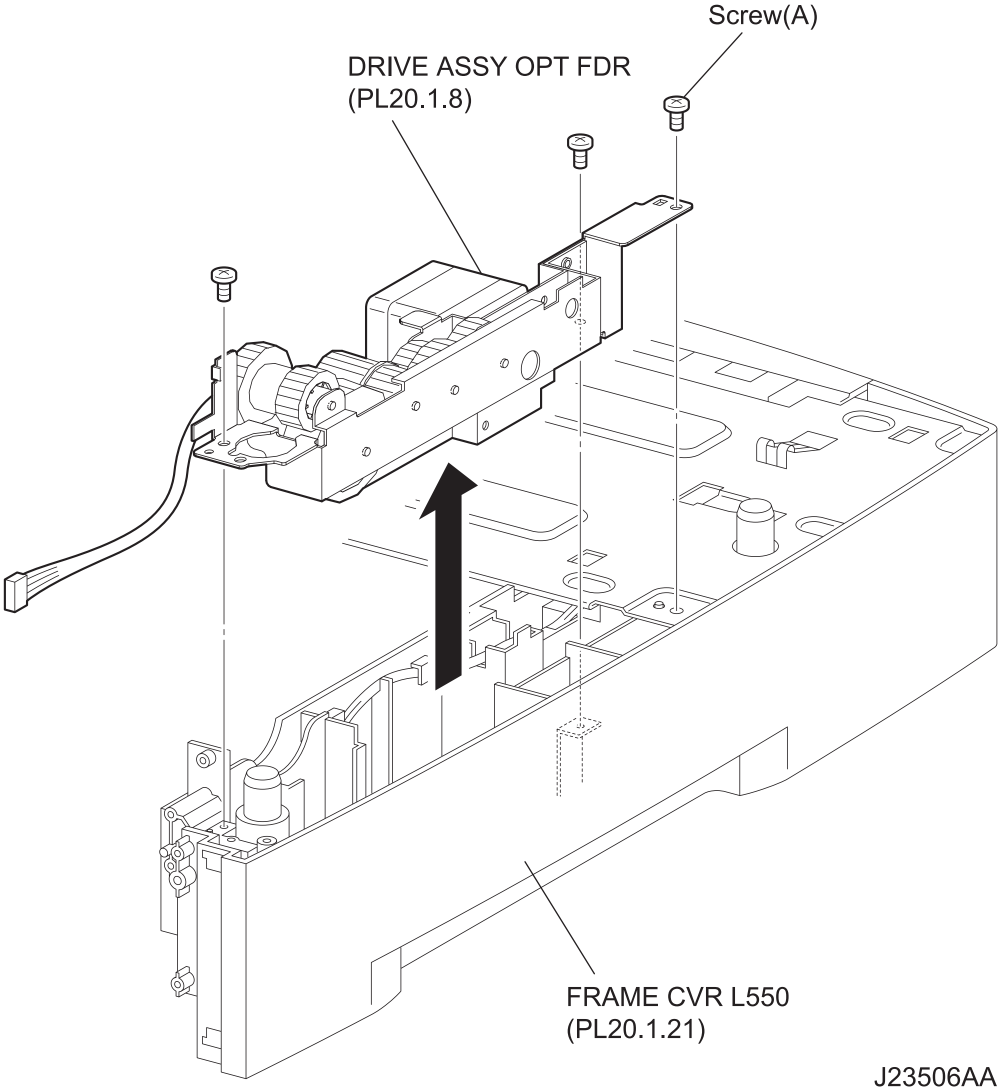
Removal

1) Release the HARNESS ASSY SIZE FDR1 (PL20.1.19) from the hooks of the FRAME CVR L550 (PL20.1.21).
2) Remove the 2 screws (gold tapping, 8mm) securing the OPT ASSY SIZE to the FRAME CVR L550.
3) Shift the OPT ASSY SIZE in the direction of the arrow to release the bosses, and remove it from the FRAME CVR L550.
4) Disconnect the connector (P/J802) of the HARNESS ASSY SIZE FDR1 from the connector of the OPT ASSY SIZE.

Replacement

1) Shift the OPT ASSY SIZE in the opposite direction of the arrow, and install it to the FRAME CVR L550 (PL20.1.21) using the 2 screws (gold tapping, 8mm).
2) Connect the connector (P/J802) of the HARNESS ASSY SIZE FDR1 (PL20.1.19) to the connector of the OPT ASSY SIZE.
3) Secure the HARNESS ASSY SIZE FDR1 to the FRAME CVR L550 using hooks.

RRP20.5 DRIVE ASSY OPT FDR (PL20.1.8)


Screw(A)
DRIVE ASSY OPT FDR
(PL20.1.8)
FRAME CVR L550
(PL20.1.21)

J23506AA

Removal

1) Remove the 550 FEEDER OPTION (PL20.2.1). (RRP20.9)
2) Remove the COVER LEFT PLATE (PL20.1.3). (RRP20.3)
3) Disconnect the connector (P/J820) of the MOTOR FEEDER (PL20.1.17) attached to the DRIVE ASSY OPT FDR from the HARNESS ASSY FDR MOT (PL20.1.37).
4) Remove the 3 screws (gold tapping, 8mm x 2, silver, 6mm x 1) securing the DRIVE ASSY OPT FDR to the FRAME CVR L550 (PL20.1.21).
5) Remove the DRIVE ASSY OPT FDR.

Replacement

1) Install the DRIVE ASSY OPT FDR to the FRAME CVR L550 (PL20.1.21) using the 3 screws (gold tapping, 8mm x 2, silver, 8mm x 1).

NOTE

Be sure to tighten the screw (silver, 6mm) shown as "Screw (A)" in the figure. When tightening the screws, be careful not to pinch the harness between the board and frame.

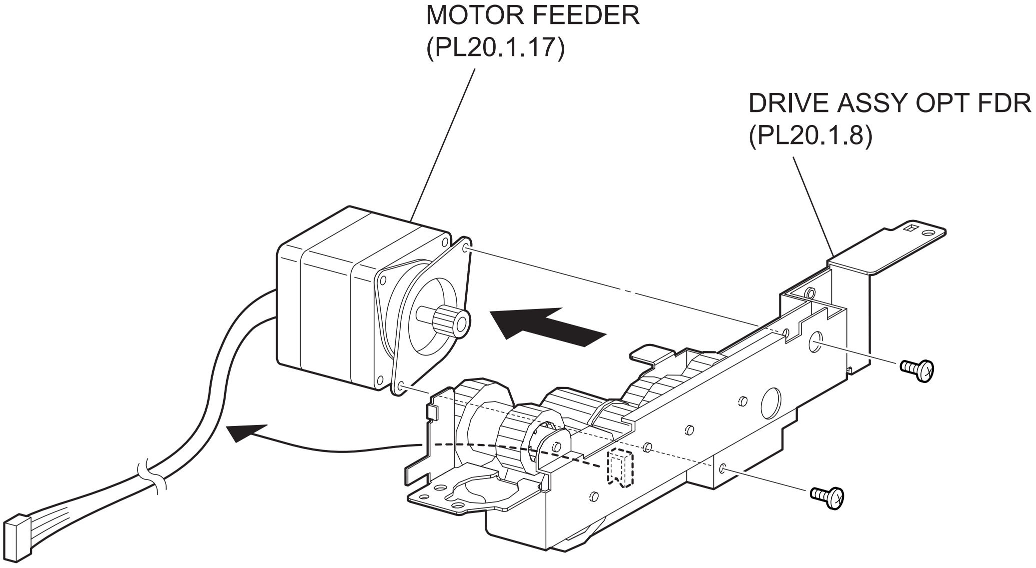
2) Connect the connector (P/J820) of the MOTOR FEEDER (PL20.1.17) attached to the DRIVE ASSY OPT FDR to the HARNESS ASSY FDR MOT (PL20.1.37).
3) Install the COVER LEFT PLATE (PL20.1.3). (RRP20.3)

NOTE

When installing the EARTH PLATE, be sure to install the tip of the EARTH PLATE under the COVER LEFT PLATE.

4) Install the 550 FEEDER OPTION (PL20.2.1). (RRP20.9)

RRP20.6   MOTOR FEEDER (PL20.1.17)


MOTOR FEEDER
(PL20.1.17)
DRIVE ASSY OPT FDR
(PL20.1.8)

J23507AA

Removal

1) Remove the 550 FEEDER OPTION (PL20.2.1). (RRP20.9)
2) Remove the COVER LEFT PLATE (PL20.1.3). (RRP20.3)
3) Remove the DRIVE ASSY OPT FDR (PL20.1.8). (RRP20.5)
4) Remove the 2 screws (gold, 6mm) securing the MOTOR FEEDER to the DRIVE ASSY OPT FDR.
5) Remove the MOTOR FEEDER.

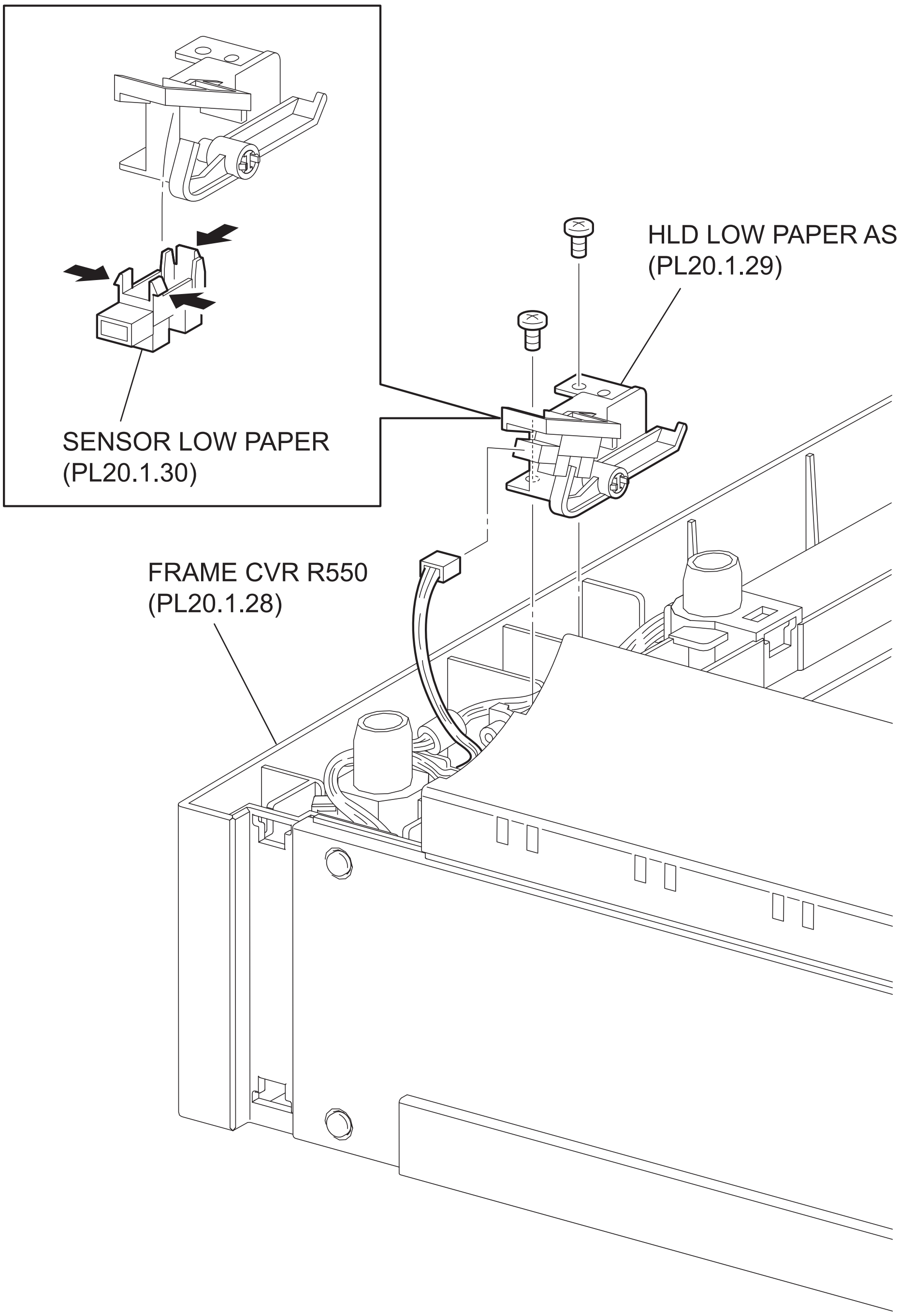
Replacement

1) Install the MOTOR FEEDER to the DRIVE ASSY OPT FDR (PL20.1.8) using the 2 screws (gold, 6mm).
2) Install the DRIVE ASSY OPT FDR. (RRP20.5)
3) Install the COVER LEFT PLATE (PL20.1.3). (RRP20.3)

NOTE **When installing the EARTH PLATE, be sure to install the tip of the EARTH PLATE under the COVER LEFT PLATE.**

4) Install the 550 FEEDER OPTION (PL20.2.1). (RRP20.9)

RRP20.7 SENSOR LOW PAPER (PL20.1.30)


HLD LOW PAPER ASSY
(PL20.1.29)
SENSOR LOW PAPER
(PL20.1.30)
FRAME CVR R550
(PL20.1.28)

JG3508AA

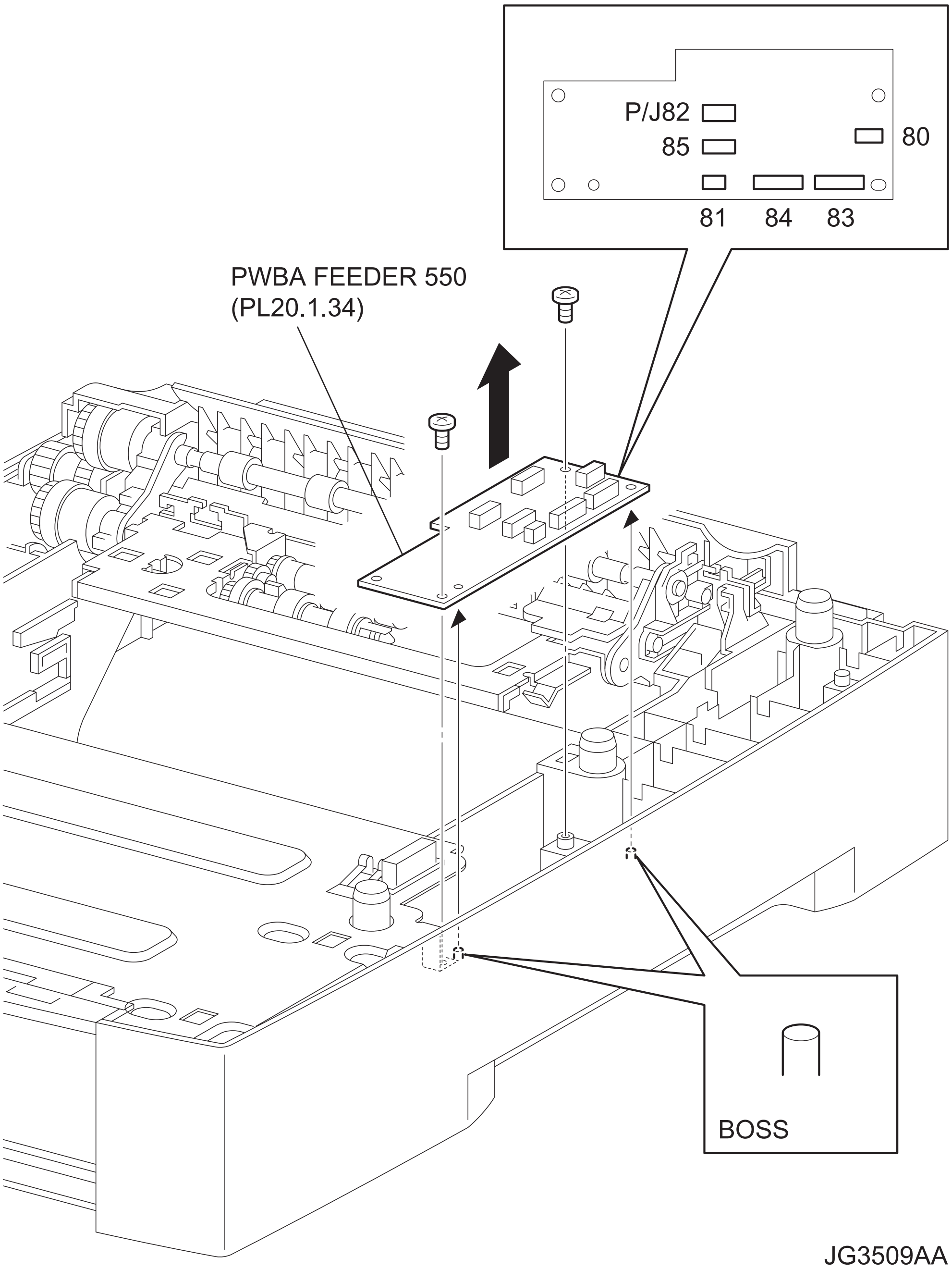
Removal

1) Remove the COVER RIGHT PLATE (PL20.1.1). (RRP20.2)
2) Remove the 2 screws securing the HLD LOW PAPER ASSY (PL20.1.29) to the FRAME CVR R550 (PL20.1.28).
3) Disconnect the connector (P/J810) of the HARNESS LOW PAPER (PL20.1.33) from the SENSOR LOW PAPER of the HLD LOW PAPER ASSY.
4) Remove the HLD LOW PAPER ASSY.
5) Release the hooks of the SENSOR LOW PAPER, and remove it from the HLD LOW PAPER ASSY.

Replacement

1) Install the SENSOR LOW PAPER to the HLD LOW PAPER ASSY (PL20.1.29).
2) Connect the connector (P/J810) of the HARNESS LOW PAPER (PL20.1.33) to the SENSOR LOW PAPER of the HLD LOW PAPER ASSY.
3) Install the HLD LOW PAPER ASSY to the FRAME CVR R550 (PL20.1.28) using the 2 screws.
4) Install the COVER RIGHT PLATE (PL20.1.1). (RRP20.2)

RRP20.8 PWBA FEEDER 550 (PL20.1.34)


P/J82
85
80
81
84
83
PWBA FEEDER 550
(PL20.1.34)
BOSS
JG3509AA

Removal

1) Remove the COVER RIGHT PLATE (PL20.1.1). (RRP20.2)
2) Disconnect the harness connectors from the connectors (P/J80, P/J81, P/J82, P/J83, P/J84 and P/J85) on the PWBA FEEDER 550.
3) Remove the 2 screws (gold tapping, 8mm) securing the PWBA FEEDER 550 to the frame.
4) Remove the PWBA FEEDER 550.

Replacement

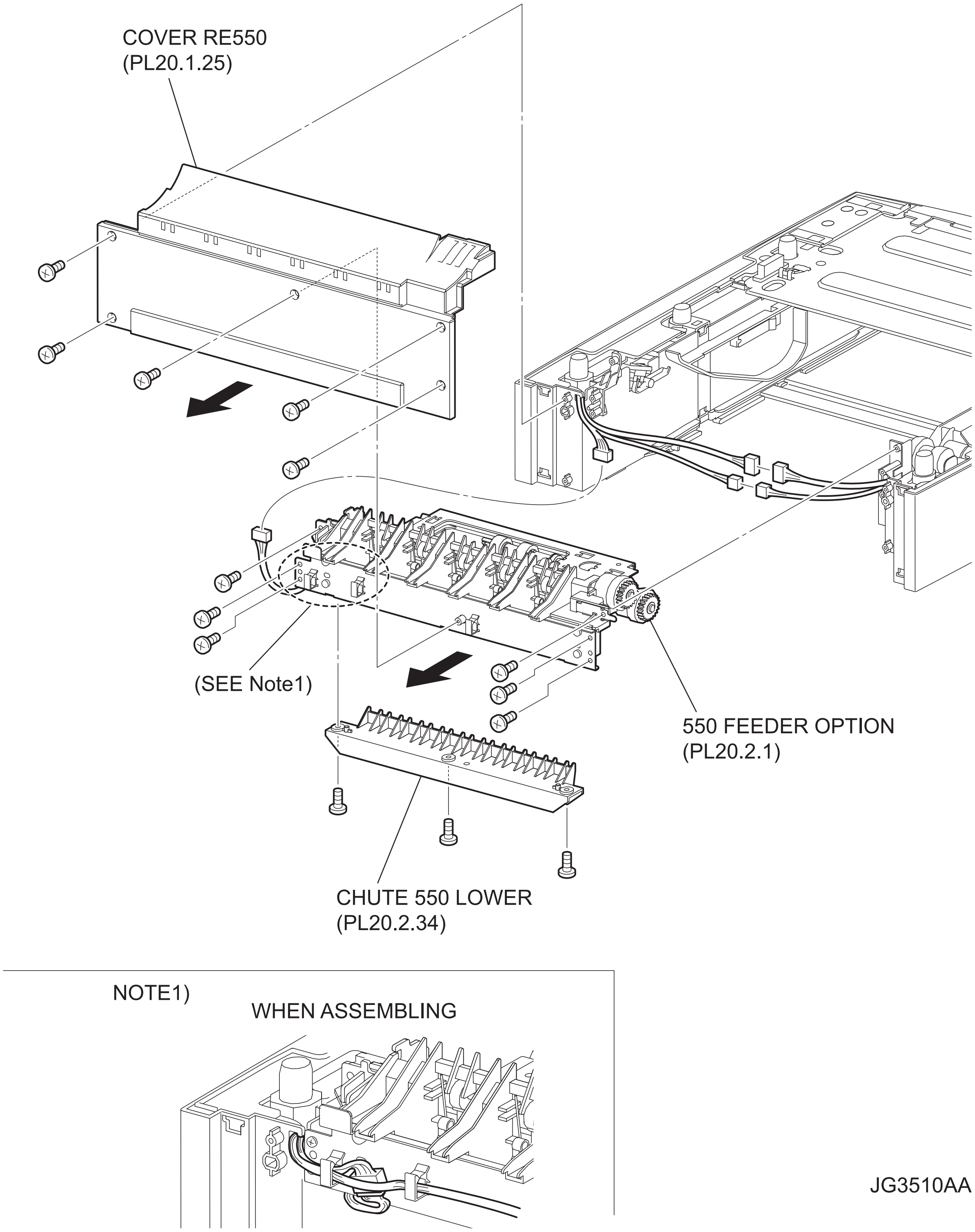
1) Install the PWBA FEEDER 550 to the frame using the 2 screws (gold tapping, 8mm).

NOTE **One of the screws that secure the PWBA FEEDER 550 is tightened together with the FRAME TOP ASSY.**

NOTE **When installing, align the hole of the PWBA FEEDER 550 with the boss of the FRAME CVR R550.**

2) Connect the connectors (P/J80, P/J81, P/J82, P/J83, P/J84 and P/J85) on the PWBA FEEDER 550 to the harness connectors.
3) Install the COVER RIGHT PLATE (PL20.1.1). (RRP20.2)

RRP20.9 550 FEEDER OPTION (PL20.2.1)


COVER RE550
(PL20.1.25)
(SEE Note1)
550 FEEDER OPTION
(PL20.2.1)
CHUTE 550 LOWER
(PL20.2.34)
NOTE1)
WHEN ASSEMBLING
JG3510AA

Removal

1) Remove the 5 screws (gold tapping, 8mm) securing the COVER RE550 (PL20.1.25) to the frame.
2) Remove the COVER RE550.
3) Disconnect the connector (P/J855) of the HARNESS ASSY CLSNR1 (PL20.1.31) from the HARNESS ASSY CLSNR2 (PL20.1.36).
4) Disconnect the connector (P/J820) of the MOTOR FEEDER (PL20.1.17) from the HARNESS ASSY FDR MOT (PL20.1.37).
5) Disconnect the connector (P/J801) of the HARNESS ASSY SIZE FDR1 (PL20.1.19) from the HARNESS ASSY SIZE FDR2 (PL20.1.35).
6) Release the clamp of the HARNESS ASSY FDR MOT and HARNESS ASSY SIZE FDR2 from the clamps.
7) Remove the 6 screws (gold tapping, 8mm) securing the 550 FEEDER OPTION to the frame.
8) Remove the 550 FEEDER OPTION from the frame.

NOTE **Following procedures is performed, if necessary.**

9) Remove the 3 screws (silver, 6mm) securing the CHUTE 550 LOWER (PL20.2.34) to the 550 FEEDER OPTION, and remove the CHUTE 550 LOWER from the 550 FEEDER OPTION.

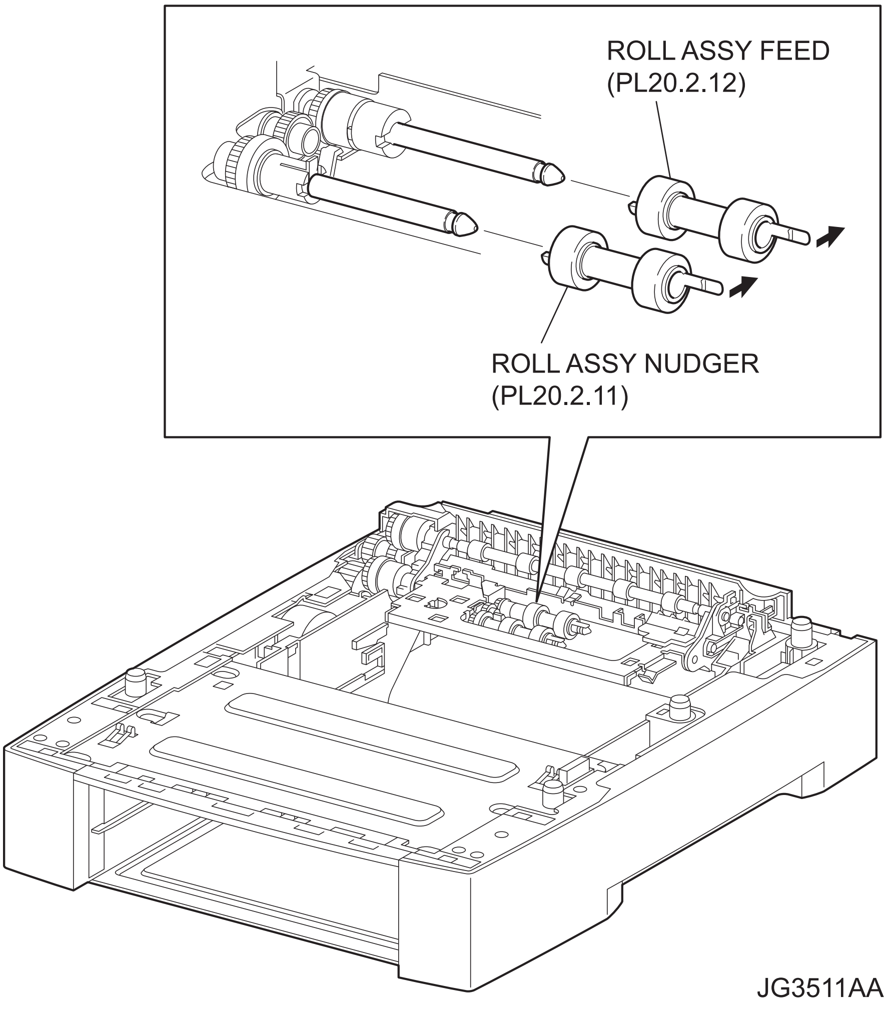
Replacement

1) Install the CHUTE 550 LOWER (PL20.2.34) to the 550 FEEDER OPTION using the 3 screws (silver, 6mm).
2) Install the 550 FEEDER OPTION to the frame using the 6 screws (gold tapping, 8mm).
3) Secure the HARNESS ASSY FDR MOT (PL20.1.37) and HARNESS ASSY SIZE FDR2 (PL20.1.35) using clamps.
4) Connect the connector (P/J801) of the HARNESS ASSY SIZE FDR1 (PL20.1.19) to the HARNESS ASSY SIZE FDR2.
5) Connect the connector (P/J820) of the MOTOR FEEDER (PL20.1.17) to the HARNESS ASSY FDR MOT.
6) Connect the connector (P/J855) of the HARNESS ASSY CLSNR1 (PL20.2.31) to the HARNESS ASSY CLSNR2 (PL20.1.36).

NOTE **After connecting the connector, put the connector under the harness to hold the connector.**

7) Install the COVER RE550 (PL20.1.25) to the frame using the 5 screws (gold tapping, 8mm).

RRP20.10 ROLL ASSY NUDGER (PL20.2.11), ROLL ASSY FEED (PL20.2.12)


ROLL ASSY FEED
(PL20.2.12)
ROLL ASSY NUDGER
(PL20.2.11)
JG3511AA

Removal

1) Release the hook securing the ROLL ASSY NUDGER, and pull it out from the SHAFT NUDGER (PL20.2.9).
2) Release the hook securing the ROLL ASSY FEED, and pull it out from the SHAFT FEED (PL20.2.16).

NOTE **When removing, do not hold the rubber rollers of the ROLL ASSY NUDGER and ROLL ASSY FEED.**

Replacement

NOTE **The ROLL ASSY FEED and ROLL ASSY NUDGER are the same parts, although the names differ.**

1) Install the ROLL ASSY FEED to the SHFT FEED (PL20.2.16), and secure the ROLL ASSY FEED with the hook.

NOTE **Be sure to install the hook of the ROLL ASSY FEED into the groove of the SHAFT FEED.**

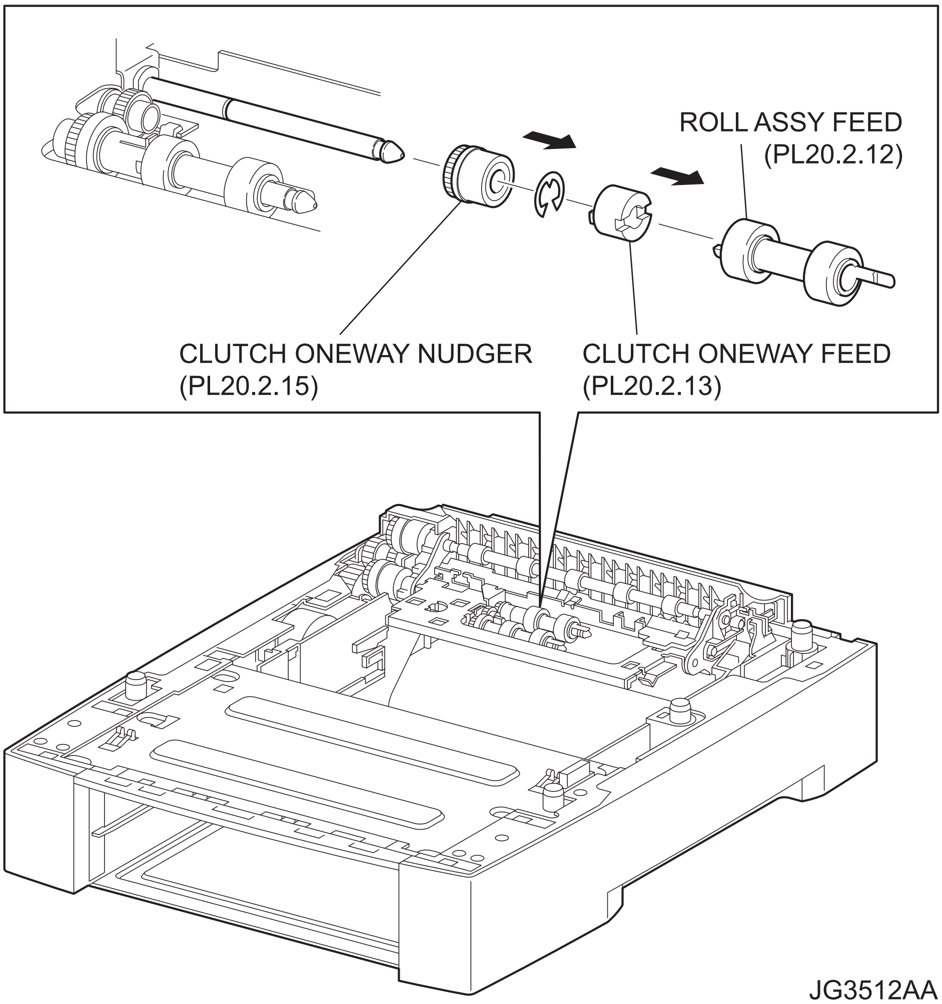
NOTE **When installing, do not hold the rubber rollers of the ROLL ASSY FEED.**

2) Install the ROLL ASSY NUDGER to the SHFT NUDGER (PL20.2.9), and secure the ROLL ASSY NUDGER with the hook.

NOTE **Be sure to install the hook of the ROLL ASSY NUDGER into the groove of the SHAFT NUDGER.**

NOTE **When installing, do not hold the rubber rollers of the ROLL ASSY NUDGER.**

RRP20.11 CLUTCH ONEWAY NUDGER (PL20.2.15)


ROLL ASSY FEED
(PL20.2.12)
CLUTCH ONEWAY NUDGER
(PL20.2.15)
CLUTCH ONEWAY FEED
(PL20.2.13)
JG3512AA

Removal

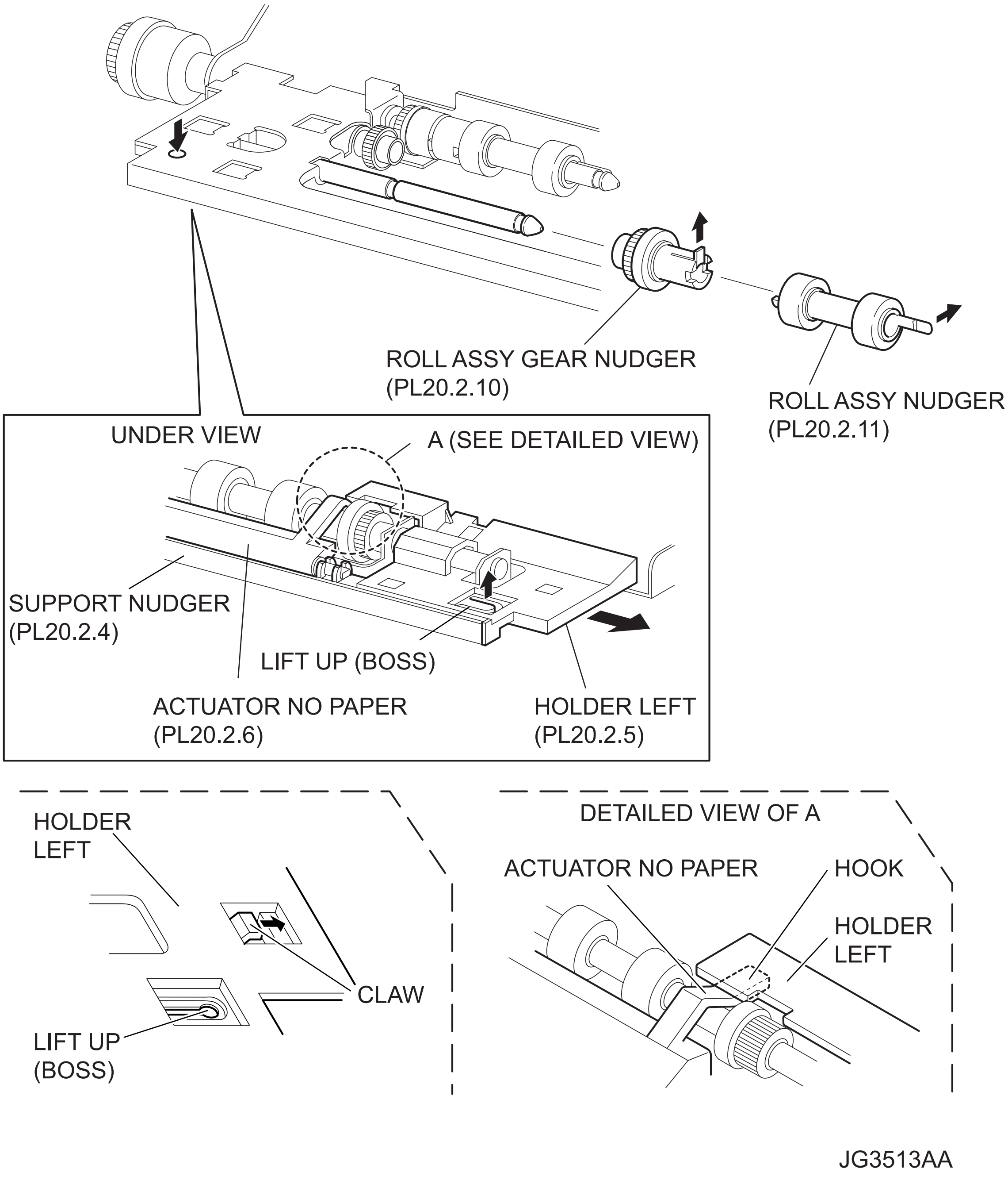
1) Remove the ROLL ASSY FEED (PL20.2.12). (RRP20.10)
2) Pull out the CLUTCH ONEWAY FEED (PL20.2.13) from the SHAFT FEED (PL20.2.16).
3) Remove the E-ring securing the CLUTCH ONEWAY NUDGER to the SHAFT FEED.
4) Pull out the CLUTCH ONEWAY NUDGER from the SHAFT FEED.

Replacement

1) Install the CLUTCH ONEWAY NUDGER to the SHAFT FEED (PL20.2.16).
2) Clip the E-ring to the SHAFT FEED to secure the CLUTCH ONEWAY NUDGER.
3) Install the CLUTCH ONEWAY FEED (PL20.2.13) to the SHAFT FEED.
4) Install the ROLL ASSY FEED (PL20.2.12). (RRP20.10)

NOTE **Be sure to install the hook of the ROLL ASSY FEED into the groove of the SHAFT FEED.**

RRP20.12 GEAR NUDGER (PL20.2.10)


ROLL ASSY GEAR NUDGER
(PL20.2.10)
ROLL ASSY NUDGER
(PL20.2.11)
UNDER VIEW
A (SEE DETAILED VIEW)
SUPPORT NUDGER
(PL20.2.4)
LIFT UP (BOSS)
ACTUATOR NO PAPER
(PL20.2.6)
HOLDER LEFT
(PL20.2.5)
HOLDER
LEFT
CLAW
LIFT UP
(BOSS)
DETAILED VIEW OF A
ACTUATOR NO PAPER
HOOK
HOLDER
LEFT
JG3513AA

Removal

1) While lifting up the boss of the HOLDER LEFT (PL20.2.5) at the back of the 550 FEEDER OPTION, shift the HOLDER LEFT in the direction of the arrow to remove the 3 hooks.
2) Remove the HOLDER LEFT from the SUPPORT NUDGER (PL20.2.4). At the same time, the ACTUATOR NO PAPER (PL20.2.6) is removed.
3) Release the hook of the ROLL ASSY NUDGER (PL20.2.11), and pull it out from the SHAFT NUDGER (PL20.2.9).
4) Release the hook of the GEAR NUDGER, and pull it out from the SHAFT NUDGER.

NOTE **When removing, do not hold the rubber rollers of the ROLL ASSY NUDGER and GEAR NUDGER.**

Replacement

1) Install the GEAR NUDGER to the SHFT NUDGER (PL20.2.9), and secure it with the hook.

NOTE **Be sure to install the hook of the GEAR NUDGER into the groove of the SHAFT NUDGER.**

NOTE **When installing, do not hold the rubber rollers of the GEAR NUDGER.**

2) Install the ROLL ASSY NUDGER (PL20.2.11) to the SHFT NUDGER, and secure it with the hook.

NOTE **Be sure to install the hook of the ROLL ASSY NUDGER into the groove of the SHAFT NUDGER.**

NOTE **When installing, do not hold the rubber rollers of the ROLL ASSY NUDGER.**

3) Install the ACTUATOR NO PAPER (PL20.2.6) and HOLDER LEFT (PL20.2.5) to the SUPPORT NUDGER (PL20.2.4).

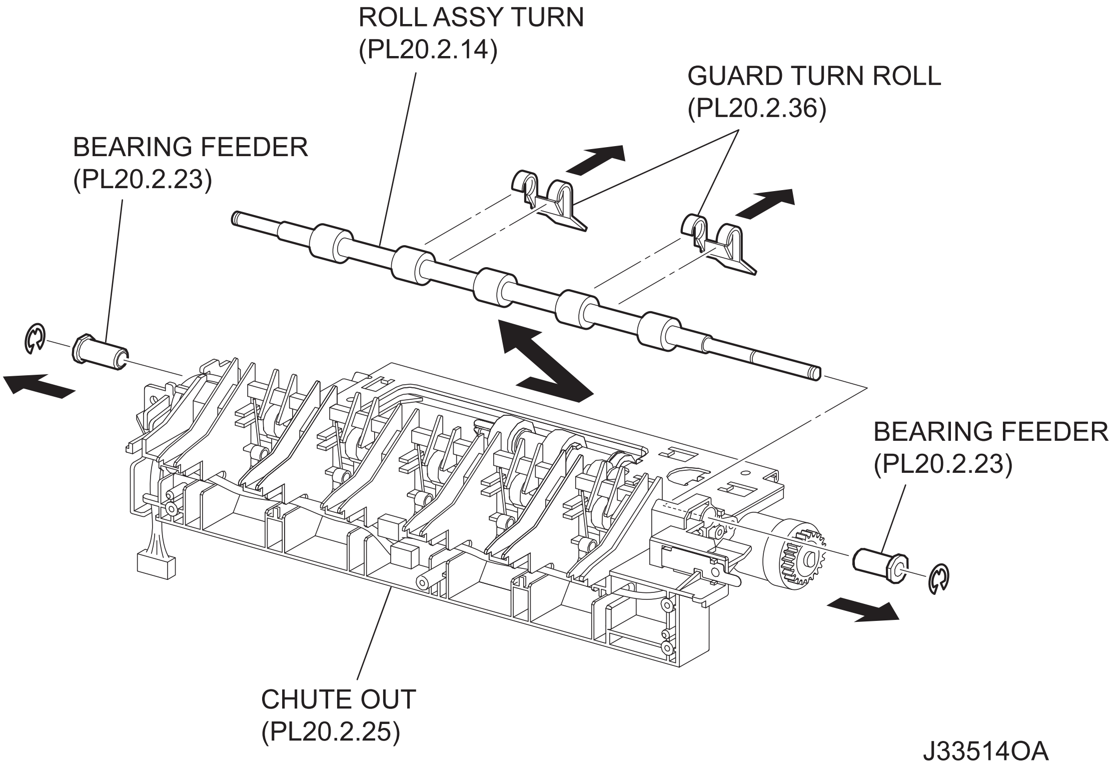
NOTE **Be sure to install the shafts on both ends of the ACTUATOR NO PAPER into the HOLDER LEFT and SUPPORT NUDGER.**

NOTE **Assemble the hook of the ACTUATOR NO PAPER with the HOLDER LEFT as shown in the figure.**

4) Move the HOLDER LEFT in the opposite direction of the arrow, and secure it to the 550 FEEDER OPTION with the 3 hooks.

NOTE **After installing, move the ACTUATOR NO PAPER with a finger, and make sure that the ACTUATOR NO PAPER operates smoothly.**

RRP20.13 ROLL ASSY TURN (PL20.2.14)


ROLL ASSY TURN
(PL20.2.14)
GUARD TURN ROLL
(PL20.2.36)
BEARING FEEDER
(PL20.2.23)
BEARING FEEDER
(PL20.2.23)
CHUTE OUT
(PL20.2.25)
J33514OA

Removal

1) Remove the 550 FEEDER OPTION (PL20.2.1). (RRP20.9)
2) Remove the CLUTCH PR-REGI (PL20.2.22). (RRP20.15)
3) Remove the two GUARD TURN ROLLs (PL20.2.36) from the ROLL ASSY TURN (PL20.2.14).
4) Remove 2 E-rings on both ends of the ROLL ASSY TURN securing the BEARING FEEDER (PL20.2.23).
5) Remove the BEARING FEEDERs from the CHUTE OUT (PL20.2.25).
6) Shift the ROLL ASSY TURN in the direction of the arrow, and remove it from the CHUTE OUT (PL20.2.18)

NOTE **When removing, do not hold the rubber rollers of the ROLL ASSY TURN.**

Replacement

1) Move the ROLL ASSY TURN in the opposite direction of the arrow, and install it to the CHUTE OUT (PL20.2.25)

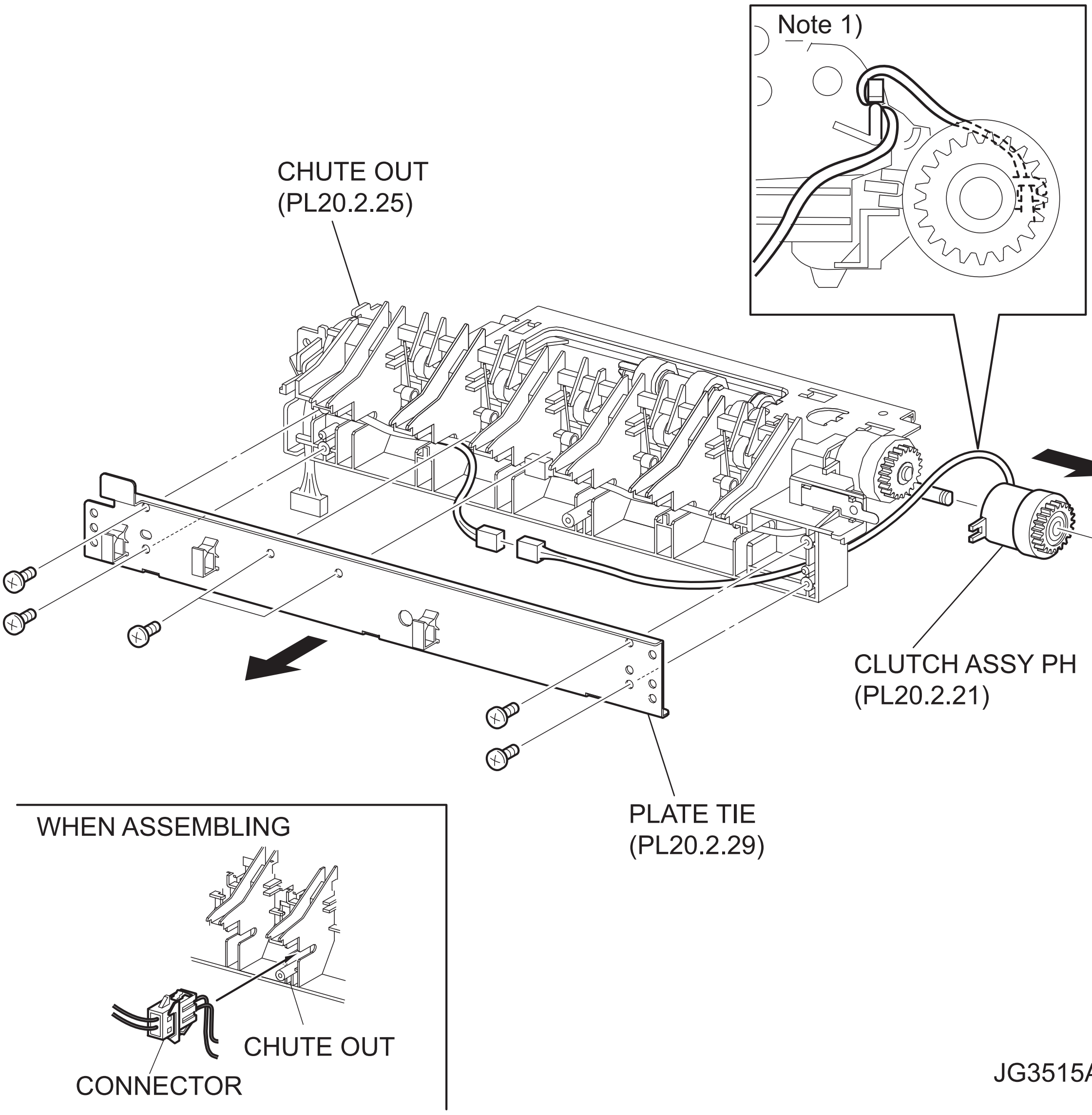
NOTE **When installing, do not hold the rubber rollers of the ROLL ASSY TURN.**

2) Install the BEARING FEEDERs (PL20.2.23) to the CHUTE OUT.
3) Clip 2 E-rings on both ends of the ROLL ASSY TURN to secure the BEARING FEEDERs.
4) Install the two GUARD TURN ROLLs (PL20.2.36) to the ROLL ASSY TURN.
5) Install the CLUTCH PR-REGI (PL20.2.22). (RRP20.15)

NOTE **When installing, make sure that the notch of the CLUTCH PR-REGI is combined with the boss of the CHUTE OUT.**

6) Install the 550 FEEDER OPTION (PL20.2.1). (RRP20.9)

RRP20.14   CLUTCH ASSY PH (PL20.2.21)


Note 1)
CHUTE OUT
(PL20.2.25)
CLUTCH ASSY PH
(PL20.2.21)
PLATE TIE
(PL20.2.29)
WHEN ASSEMBLING
CHUTE OUT
CONNECTOR
JG3515AB

Removal

1) Remove the 550 FEEDER OPTION (PL20.2.1). (RRP20.9)
2) Remove the 6 screws (gold taping, 8mm) securing the PLATE TIE (PL20.2.29).
3) Remove the PLATE TIE from the CHUTE OUT (PL20.2.25).
4) Disconnect the connector (P/J853) of the CLUTCH ASSY PH from the HARNESS ASSY CLSNR1 (PL20.2.31).
5) Remove the E-ring securing the CLUTCH ASSY PH, and remove the CLUTCH ASSY PH from the SHAFT FEED (PL20.2.16).

Replacement

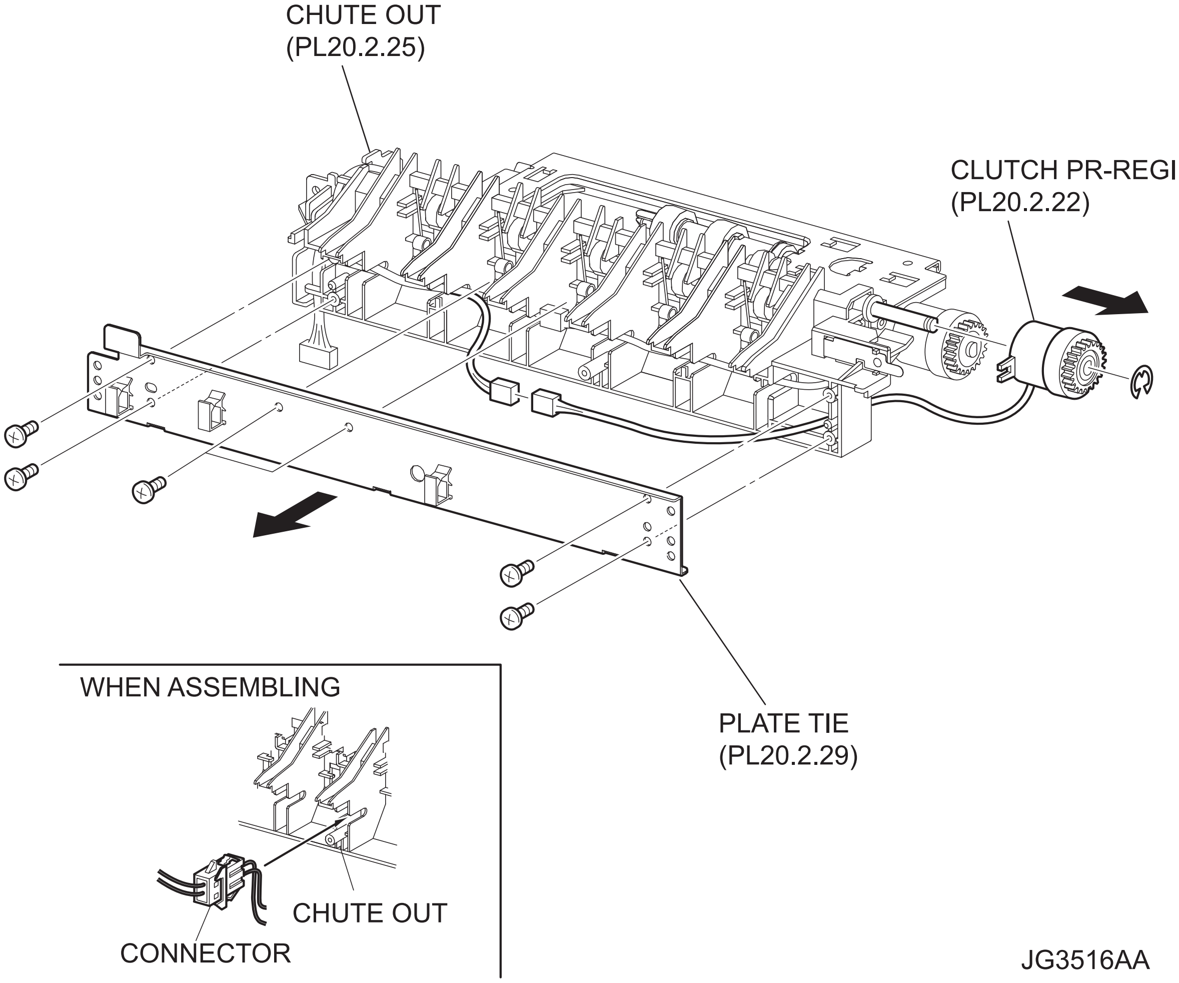
1) Install the CLUTCH ASSY PH to the SHAFT FEED (PL20.2.16), and secure it with the E-ring.

NOTE **When installing, make sure that the notch of the CLUTCH PH is combined with the boss of the CHUTE OUT.**

NOTE **Be careful of the arranging of the harness of the CLUTCH ASSY PH.**

2) Connect the connector (P/J853) of the CLUTCH ASSY PH to the HARNESS ASSY CLSNR1 (PL20.2.31). After connecting the connector, put the connector into the space between two ribs of the CHUTE OUT (PL20.2.25).
3) Install the PLATE TIE (PL20.2.29) to the CHUTE OUT using the 6 screws (gold tapping, 8mm).
4) Install the 550 FEEDER OPTION (PL20.2.1). (RRP20.9)

RRP20.15 CLUTCH PR-REGI (PL20.2.22)


CHUTE OUT
(PL20.2.25)
CLUTCH PR-REGI
(PL20.2.22)
PLATE TIE
(PL20.2.29)
WHEN ASSEMBLING
CHUTE OUT
CONNECTOR
JG3516AA

Removal

1) Remove the 550 FEEDER OPTION (PL20.2.1). (RRP20.9)
2) Remove the 6 screws (gold taping, 8mm) securing the PLATE TIE (PL20.2.29).
3) Remove the PLATE TIE from the CHUTE OUT (PL20.2.25).
4) Disconnect the connector (P/J854) of the CLUTCH PR-REGI from the HARNESS ASSY CLSNR1 (PL20.2.31).
5) Remove the E-ring securing the CLUTCH PR-REGI, and remove the CLUTCH PR-REGI from the ROLL ASSY TURN (PL20.2.14).

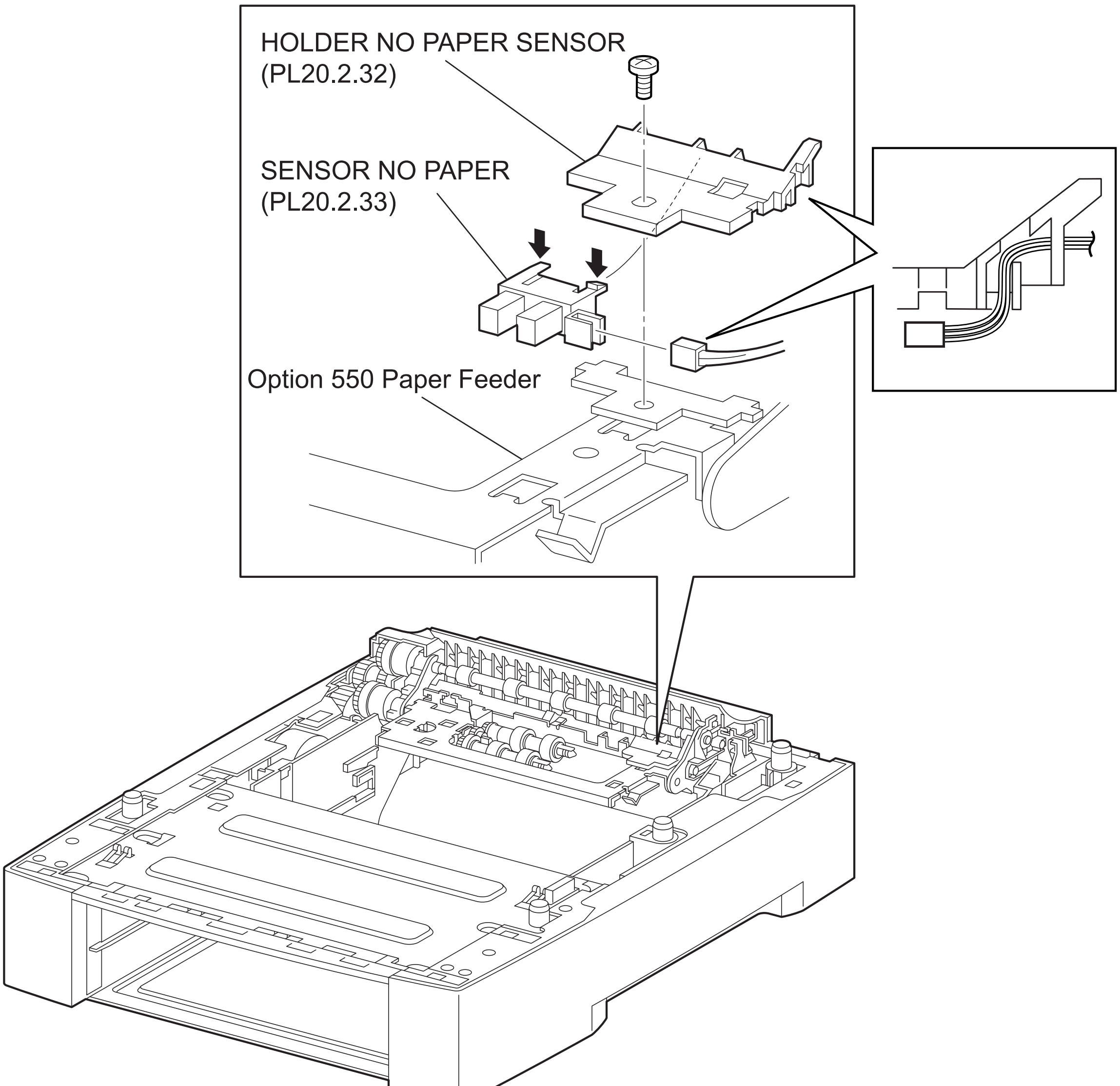
Replacement

1) Install the CLUTCH PR-REGI to the ROLL ASSY TURN (PL20.2.14), and secure it with the E-ring.

NOTE **When installing, make sure that the notch of the CLUTCH PR-REGI is combined with the boss of the CHUTE OUT.**

2) Connect the connector (P/J854) of the CLUTCH PR-REGI to the HARNESS ASSY CLSNR1 (PL20.2.31). After connecting the connector, put the connector into the space between two ribs of the CHUTE OUT (PL20.2.25).
3) Install the PLATE TIE (PL20.2.29) to the CHUTE OUT using the 6 screws (gold tapping, 8mm).
4) Install the 550 FEEDER OPTION (PL20.2.1). (RRP20.9)

RRP20.16 SENSOR NO PAPER (PL20.2.33)


HOLDER NO PAPER SENSOR
(PL20.2.32)
SENSOR NO PAPER
(PL20.2.33)
Option 550 Paper Feeder

JG3517AA

Removal

1) Remove the screw securing the HOLDER NO PAPER SENSOR (PL20.2.32).
2) Remove the HOLDER NO PAPER SENSOR from the Option 550 Paper Feeder.
3) Release the 2 hooks of the SENSOR NO PAPER, and remove the SENSOR NO PAPER from the HOLDER NO PAPER SENSOR.
4) Disconnect the connector of the HARNESS ASSY CLSNR1 (PL20.2.31) from the connector (P/J852) of the SENSOR NO PAPER.

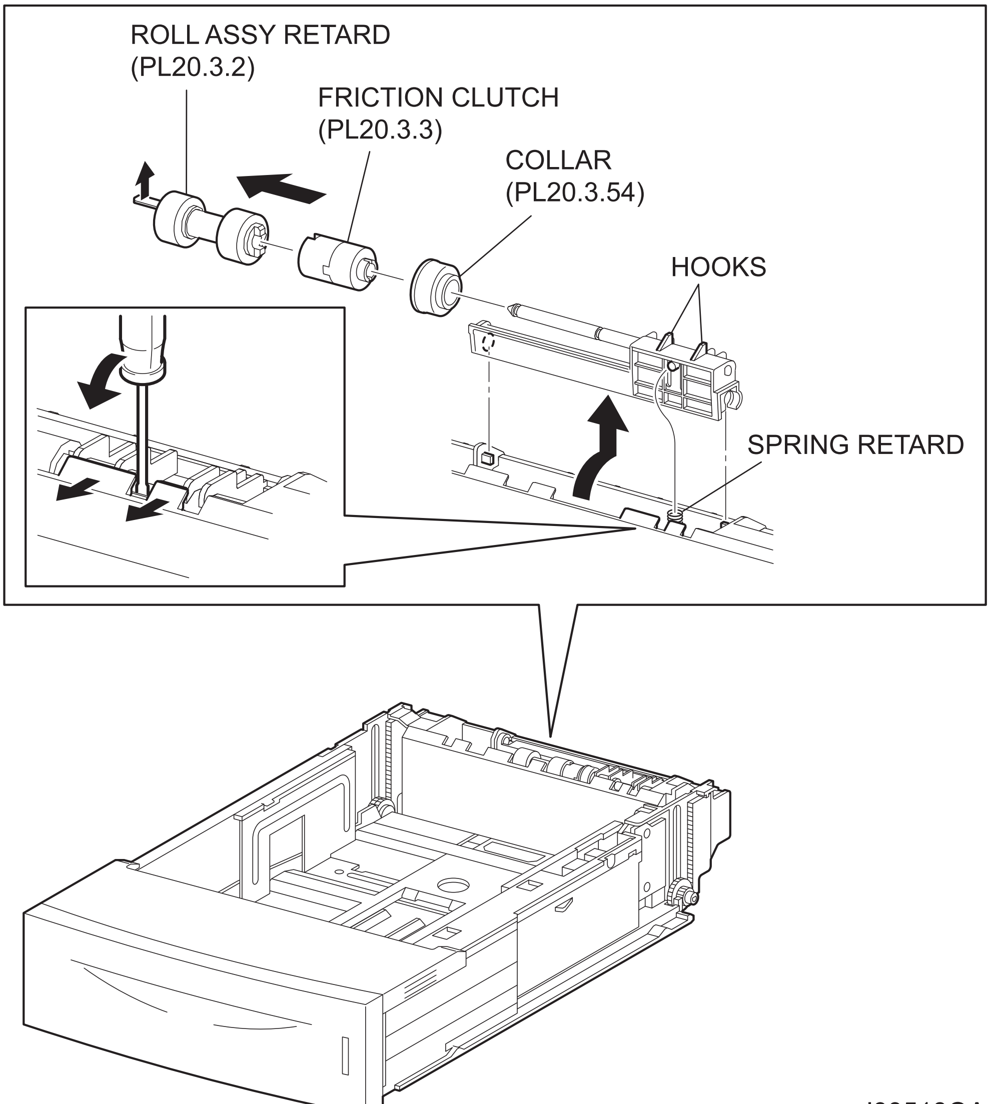
Replacement

1) Connect the connector (P/J852) of the SENSOR NO PAPER to the connector of the HARNESS ASSY CLSNR1 (PL20.2.31).
2) Install the SENSOR NO PAPER to the HOLDER NO PAPER SENSOR (PL20.2.32).
3) Install the HOLDER NO PAPER SENSOR to the Option 550 Paper Feeder using the screw.

NOTE

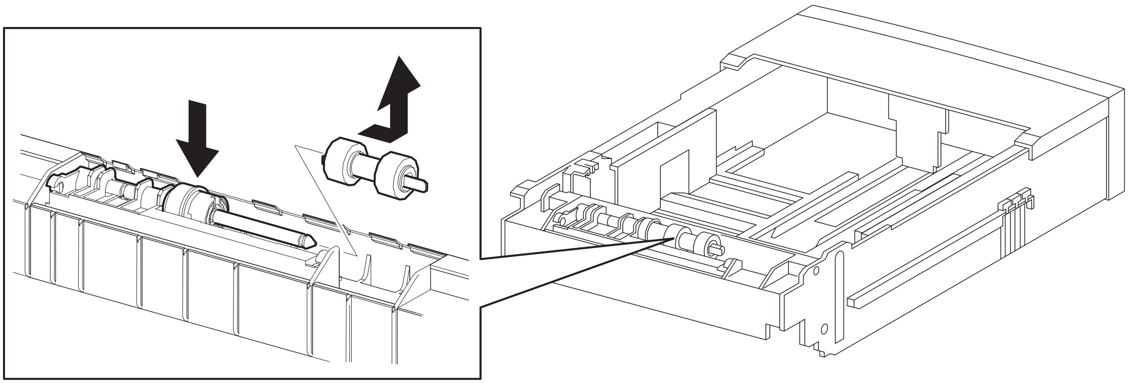
After installation, make sure that the HARNESS ASSY CLSNR1 have not pinched between the HOLDER NO PAPER SENSOR and frame.

RRP20.17 ROLL ASSY RETARD (PL20.3.2)


ROLL ASSY RETARD
(PL20.3.2)
FRICTION CLUTCH
(PL20.3.3)
COLLAR
(PL20.3.54)
HOOKS
SPRING RETARD

J33518OA

NOTE **Other than the procedure above, it is possible to remove the ROLL ASSY RETARD by pushing down the HOLDER RETARD.**



J33209OA

Removal

1) Pull out the 550 PAPER CASSETTE (PL20.3.50) from the Option 550 Paper Feeder.
2) Release the hooks securing the HOLDER RETARD (PL20.3.5) to the 550 PAPER CASSETTE using a screwdriver or the like.
3) Lift the HOLDER RETARD up in the direction of the arrow, and remove it.
4) Release the hook securing the ROLL ASSY RETARD, and pull it out from the SHAFT RETARD (PL20.3.4).

NOTE **When removing, do not hold the rubber rollers of the ROLL ASSY RETARD.**

NOTE **When removing HOLDER RETARD, be careful not to lose SPRING RETARD.**

Replacement

1) Install the ROLL ASSY RETARD to the SHFT RETARD (PL20.3.4), and secure the ROLL ASSY RETARD with the hook.

NOTE **When installing, do not hold the rubber rollers of the ROLL ASSY RETARD.**

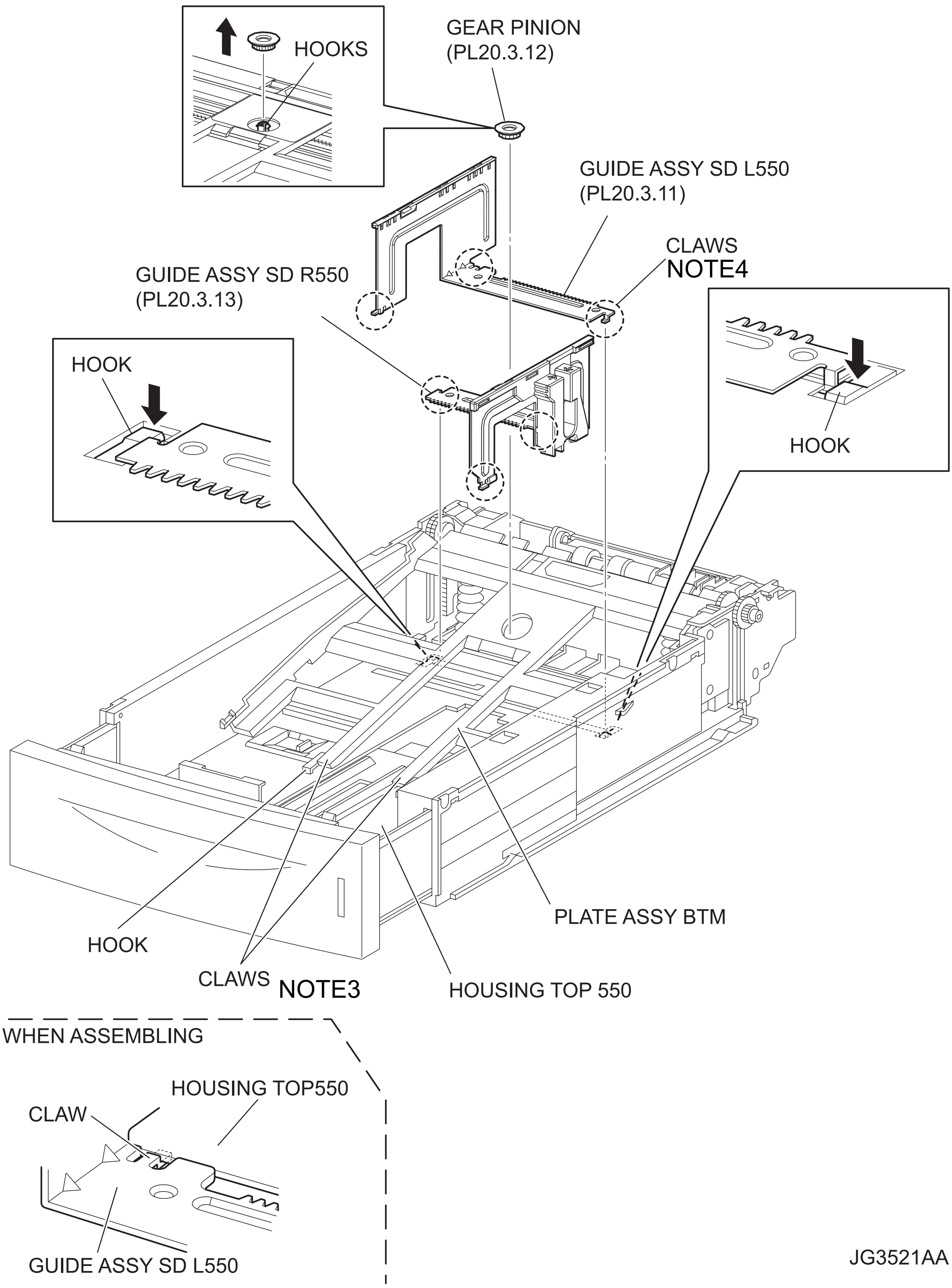
NOTE **Be sure to install the hook of the ROLL ASSY RETARD into the groove of the SHAFT RETARD.**

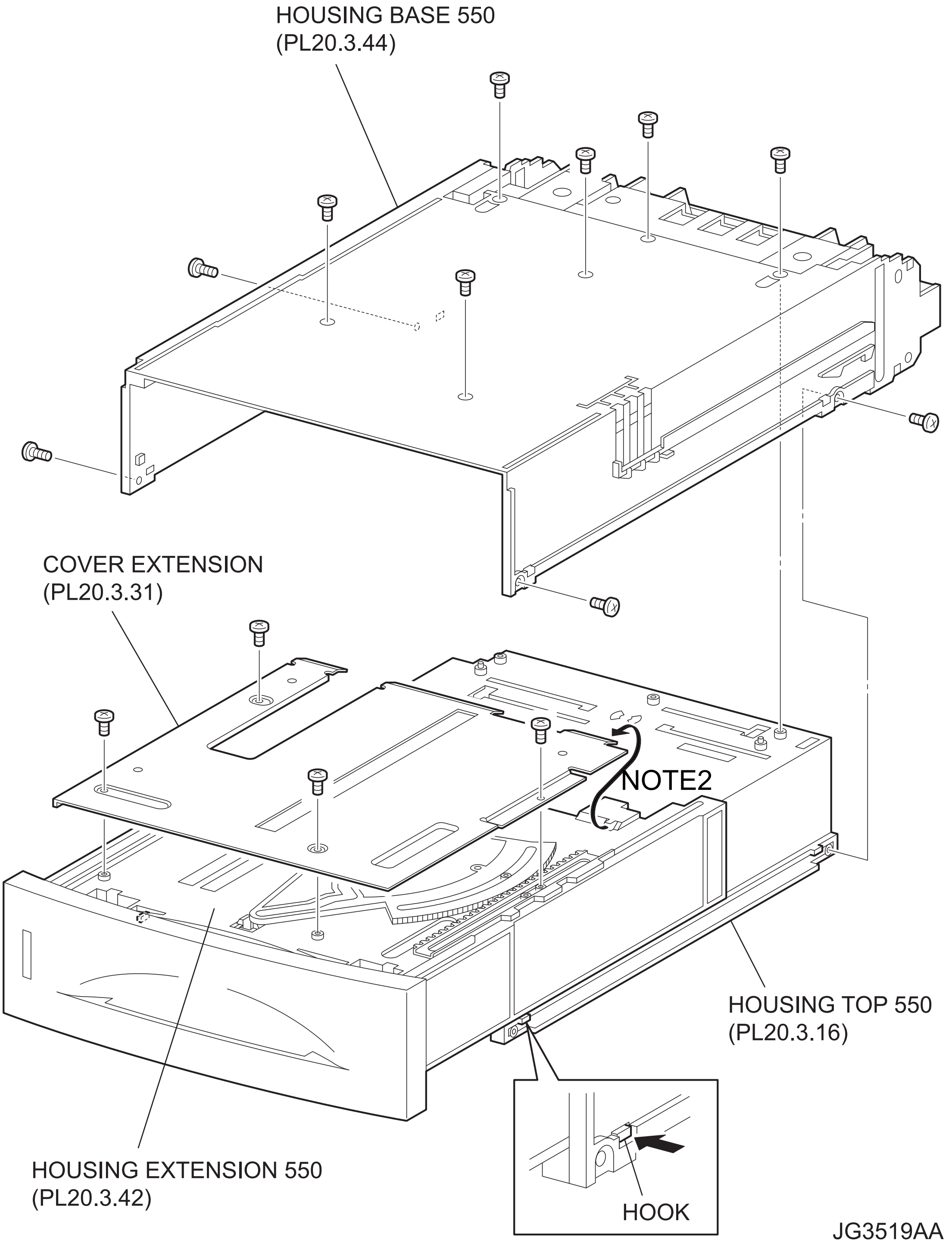
2) Move the HOLDER RETARD (PL20.3.5) in the opposite direction of the arrow, and install it to the 550 PAPER CASSETTE (PL20.3.50).

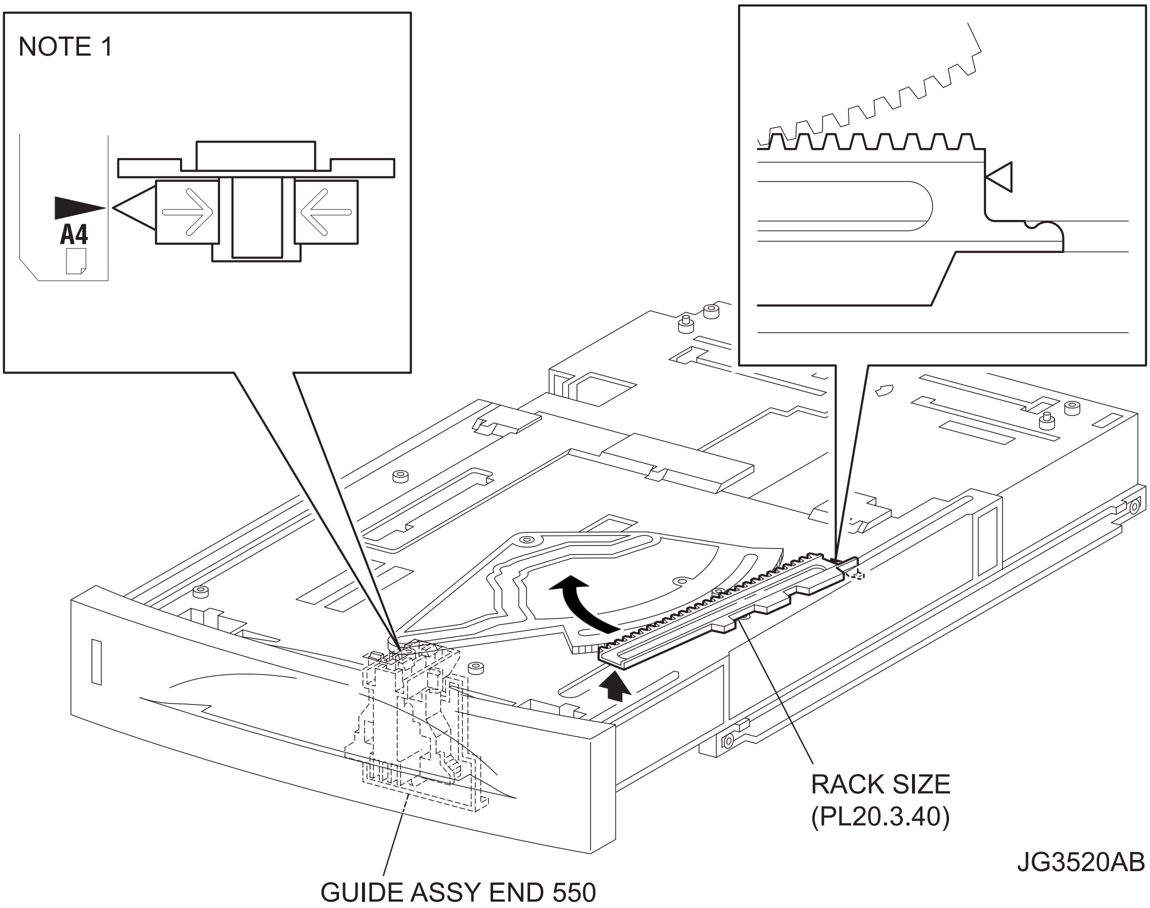
NOTE **After installing, make sure the HOLDER RETARD comes back to the former position with the spring force of the SPRING RETARD (PL20.3.6), when pushing down the HOLDER RETARD and then release the finger from it.**

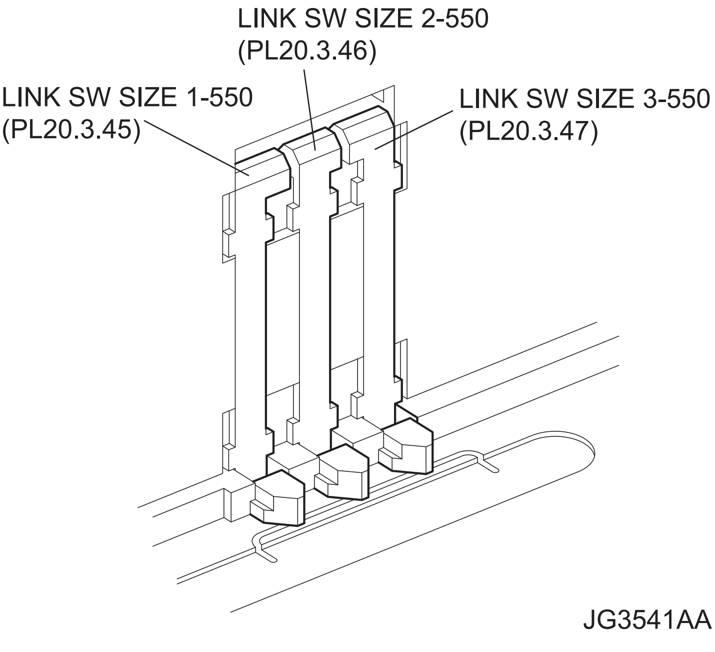
3) Install the 550 PAPER CASSETTE to the Option 550 Paper Feeder.

RRP20.18 RACK SIZE (PL20.3.40)


HOOKS
GEAR PINION
(PL20.3.12)
GUIDE ASSY SD L550
(PL20.3.11)
CLAWS
NOTE4
GUIDE ASSY SD R550
(PL20.3.13)
HOOK
HOOK
PLATE ASSY BTM
HOOK
CLAWS
NOTE3
HOUSING TOP 550
WHEN ASSEMBLING
HOUSING TOP550
CLAW
GUIDE ASSY SD L550
JG3521AA


HOUSING BASE 550
(PL20.3.44)
COVER EXTENSION
(PL20.3.31)
NOTE2
HOUSING TOP 550
(PL20.3.16)
HOUSING EXTENSION 550
(PL20.3.42)
HOOK
JG3519AA


NOTE 1
A4
RACK SIZE
(PL20.3.40)
JG3520AB
GUIDE ASSY END 550


LINK SW SIZE 2-550
(PL20.3.46)
LINK SW SIZE 1-550
(PL20.3.45)
LINK SW SIZE 3-550
(PL20.3.47)
JG3541AA

Removal

1) Remove the COVER CST (PL20.3.1) from the 550 PAPER CASSETTE (PL20.3.50).
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL20.3.12) to the HOUSING TOP 550 (PL20.3.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL20.3.29), release the lock of the LEVER BTM LOCK (PL20.3.27) to lift up the PLATE ASSY BTM. (Figure 20.21)
5) Slide the GUIDE ASSY SD L550 (PL20.3.11) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
6) Slide the GUIDE ASSY SD R550 (PL20.3.13) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
7) Remove the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on back, that secure the HOUSING TOP 550 to the HOUSING BASE 550 (PL20.3.44).
8) Release the 4 hooks of the HOUSING TOP 550, and remove the HOUSING TOP 550 together with the HOUSING EXTENSION 550 (PL20.3.42) from the HOUSING BASE 550.
9) Remove the 4 screws (gold tapping, 6mm) securing the COVER EXTENSION (PL20.3.31) to the HOUSING EXTENSION 550.
10) Remove the COVER EXTENSION from the HOUSING EXTENSION 550.
11) Lift the front end of the RACK SIZE a little, and turn it in the direction of the arrow to remove it from the HOUSING EXTENSION 550.

Replacement

1) Put the hook on the tip of the RACK SIZE into the groove of the HOUSING EXTENSION 550 (PL20.3.42), and turn it in the opposite direction of the arrow.
2) Align the end of the RACK SIZE with the triangle mark printed on the HOUSING EXTENSION 550 as shown in the figure, and install the RACK SIZE to the HOUSING EXTENSION 550.

NOTE

When installing the RACK SIZE, be sure to draw out the GUIDE ASSY END 550 (PL20.3.43) as far as it will go.(NOTE 1).

3) Install the COVER EXTENSION (PL20.3.31) to the HOUSING EXTENSION 550 using the 4 screws (gold tapping, 6mm).

NOTE

When installing, make sure the COVER EXTENSION is inserted under 3 claws of the HOUSING EXTENSION 550.(NOTE2).

NOTE

Use 6mm size of fixed screw. If 8mm size of screw is used, HOUSING EXTENSION 550 doesn't operate smoothly and LOCK EXTENSION 550 doesn't operate correctly.

4) Install the HOUSING EXTENSION 550 and HOUSING TOP 550 (PL20.3.16) to the HOUSING BASE 550 while pushing the LINK SW SIZE1-550 (PL20.3.45), LINK SW SIZE2-550 (PL20.3.46) and LINK SW SIZE3-550 (PL20.3.47) of the HOUSING BASE 550 outward as shown in the figure.

NOTE

Be sure to put 2 claws at the tip of the PLATE ASSY BTM under the hooks on the HOUSING TOP 550.(NOTE3).

5) After assembling the HOUSING TOP 550 with HOUSING BASE 550 using the 4 hooks, secure them using the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on back.

NOTE **After tightening the screws, move the GUIDE ASSY END 550 back and forth, and make sure that the LINK SW SIZEs operate smoothly.**

6) Insert the link lever of the GUIDE INDICATOR1 (PL20.3.34) into the hole of the PLATE ASSY BTM. (Figure 20.21)
7) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD R550 (PL20.3.13) to the HOUSING TOP 550.(NOTE4).

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R550 sit correctly in the grooves of the HOUSING TOP 550.**

8) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD L550 (PL20.3.11) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L550 sit correctly in the grooves of the HOUSING TOP 550.(NOTE4).**

9) Push the PLATE ASSY BTM downward to lock.
10) With completely opened GUIDE ASSY SD L550 and GUIDE ASSY SD R550 to the both sides, Install the GEAR PINION (PL20.3.12) to the HOUSING TOP 550.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R550 and GUIDE ASSY SD L550 are completely opened. If not, the side register may be misaligned.**

11) Install the COVER CST (PL20.3.1) to the 550 PAPER CASSETTE.

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM.**

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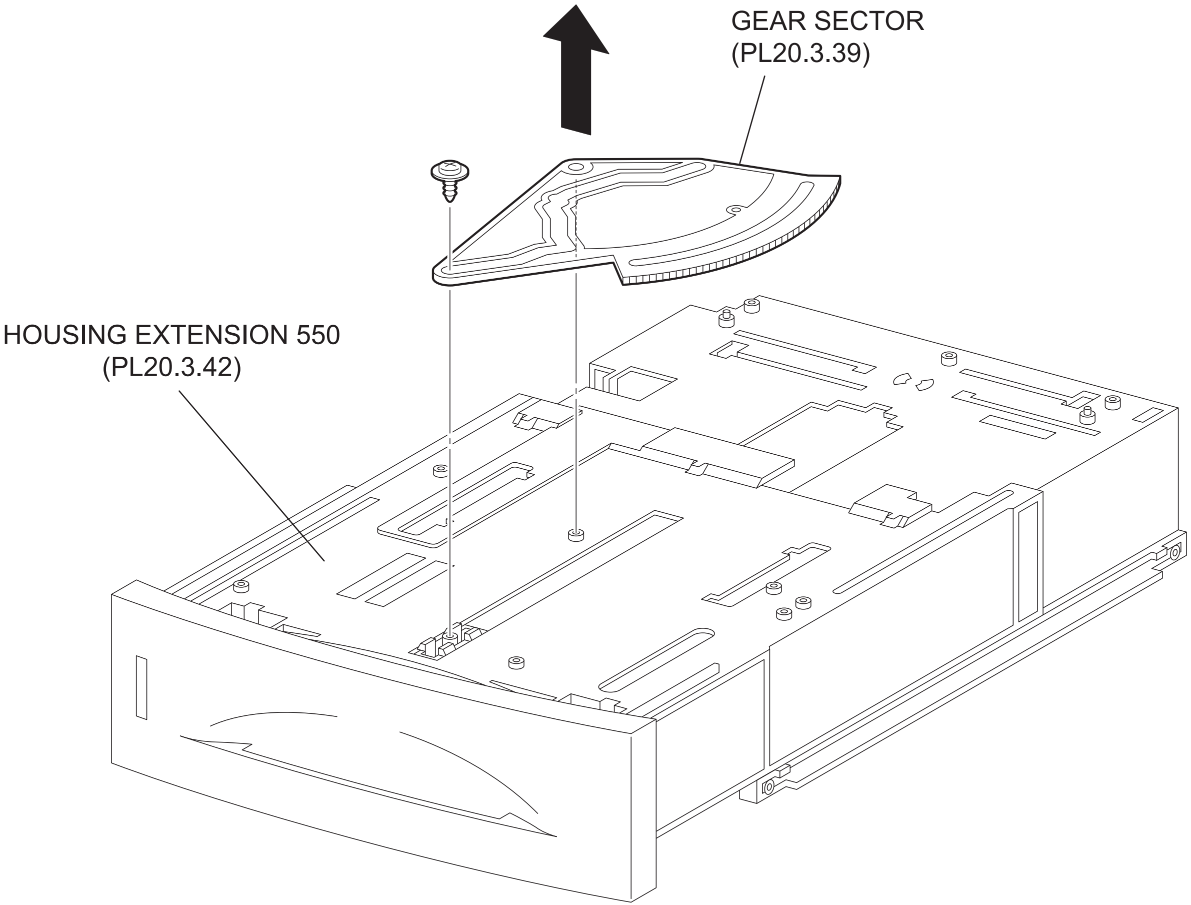
RRP20.19 GEAR SECTOR (PL20.3.39)


GEAR SECTOR
(PL20.3.39)
HOUSING EXTENSION 550
(PL20.3.42)
JG3522AA

Removal

1) Remove the COVER CST (PL20.3.1) from the 550 PAPER CASSETTE (PL20.3.50).
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL20.3.12) to the HOUSING TOP 550 (PL20.3.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL20.3.29), release the lock of the LEVER BTM LOCK (PL20.3.27) to lift up the PLATE ASSY BTM. (Figure 20.21)
5) Slide the GUIDE ASSY SD L550 (PL20.3.11) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
6) Slide the GUIDE ASSY SD R550 (PL20.3.13) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
7) Remove the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on back, that secure the HOUSING TOP 550 to the HOUSING BASE 550 (PL20.3.44).
8) Release the 4 hooks of the HOUSING TOP 550, and remove the HOUSING TOP 550 together with the HOUSING EXTENSION 550 (PL20.3.42) from the HOUSING BASE 550.
9) Remove the 4 screws (gold tapping, 6mm) securing the COVER EXTENSION (PL20.3.31) to the HOUSING EXTENSION 550.
10) Remove the COVER EXTENSION from the HOUSING EXTENSION 550.
11) Remove the RACK SIZE (PL20.3.40). (RRP20.18)
12) Remove the screw (black with flange, 8mm) securing the GEAR SECTOR.
13) Remove the GEAR SECTOR from the HOUSING EXTENSION 550.

Replacement

1) Install the GEAR SECTOR to the HOUSING EXTENSION 550 (PL20.3.42).
2) Secure the GEAR SECTOR using the screw (black with flange, 8mm).
3) Install the RACK SIZE (PL20.3.40). (RRP20.18)
4) Install the COVER EXTENSION (PL20.3.31) to the HOUSING EXTENSION 550 using the 4 screws (gold tapping, 6mm).

NOTE **When installing, make sure the COVER EXTENSION is inserted under 3 claws of the HOUSING EXTENSION 550.**

NOTE **Use 6mm size of fixed screw. If 8mm size of screw is used, HOUSING EXTENSION 550 doesn't operate smoothly and LOCK EXTENSION 550 doesn't operate correctly.**

5) Install the HOUSING EXTENSION 550 and HOUSING TOP 550 (PL20.3.16) to the HOUSING BASE 550 while pushing the LINK SW SIZE1-550 (PL20.3.45), LINK SW SIZE2-550 (PL20.3.46) and LINK SW SIZE3-550 (PL20.3.47) of the HOUSING BASE 550 outward as shown in the figure. (Figure 20.18)

NOTE **Be sure to put 2 claws at the tip of the PLATE ASSY BTM under the hooks on the HOUSING TOP 550.**

6) After assembling the HOUSING TOP 550 with HOUSING BASE 550 using the 4 hooks, secure them using the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on back.

NOTE **After tightening the screws, move the GUIDE ASSY END 550 back and forth, and make sure that the LINK SW SIZEs operate smoothly.**

7) Insert the link lever of the GUIDE INDICATOR1 (PL20.3.34) into the hole of the PLATE ASSY BTM. (Figure20.24)
8) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD R550 (PL20.3.13) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R550 sit correctly in the grooves of the HOUSING TOP 550.**

9) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD L550 (PL20.3.11) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L550 sit correctly in the grooves of the HOUSING TOP 550.**

10) Push the PLATE ASSY BTM downward to lock.
11) With completely opened GUIDE ASSY SD L550 and GUIDE ASSY SD R550 to the both sides, install the GEAR PINION (PL20.3.12) to the HOUSING TOP 550.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R550 and GUIDE ASSY SD L550 are completely opened. If not, the side register may be misaligned.**

12) Install the COVER CST (PL20.3.1) to the 550 PAPER CASSETTE.

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM.**

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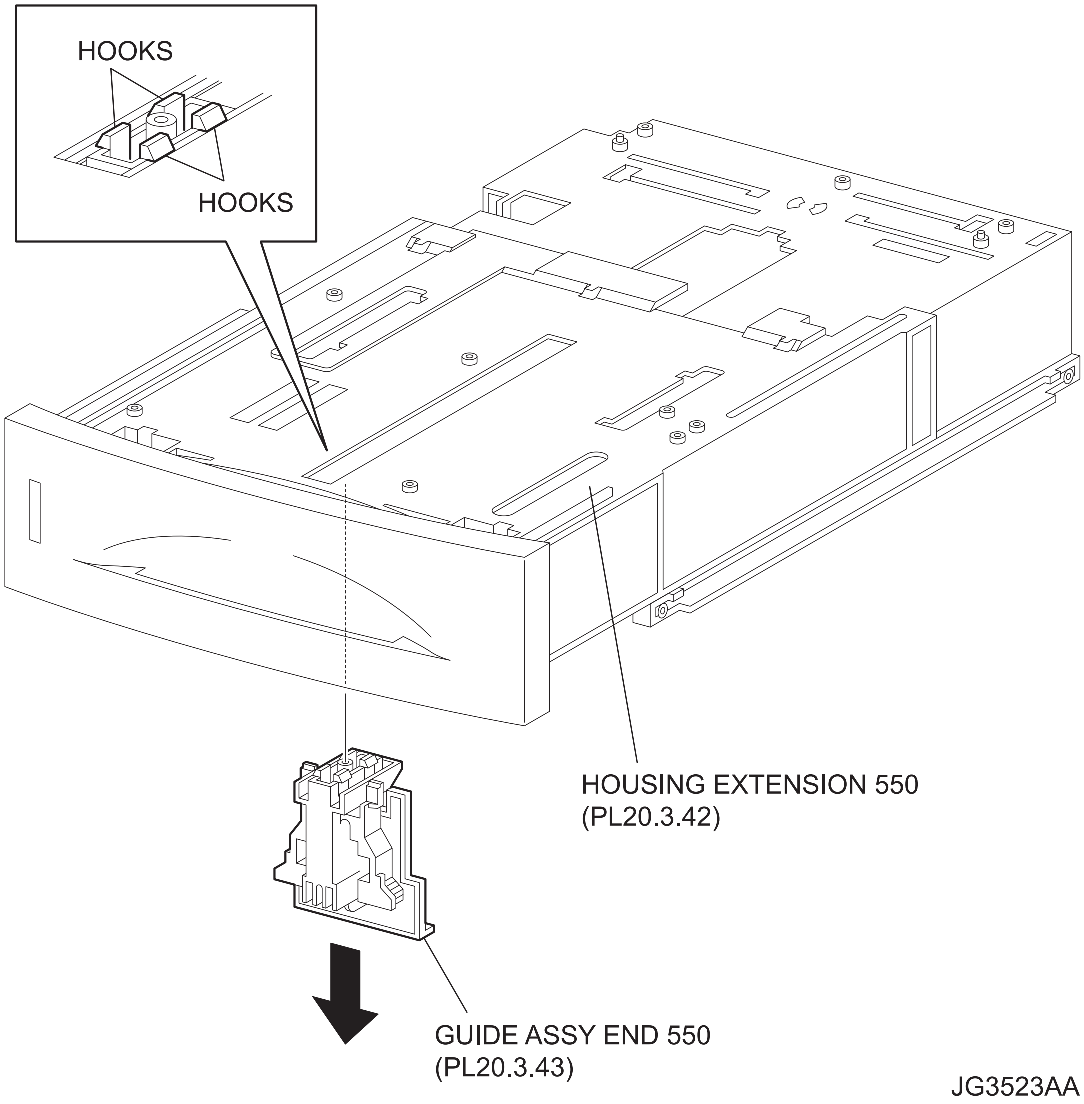
RRP20.20 GUIDE ASSY END 550 (PL20.3.43)


HOOKS
HOOKS
HOUSING EXTENSION 550
(PL20.3.42)
GUIDE ASSY END 550
(PL20.3.43)
JG3523AA

Removal

1) Remove the COVER CST (PL20.3.1) from the 550 PAPER CASSETTE (PL20.3.50).
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL20.3.12) to the HOUSING TOP 550 (PL20.3.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL20.3.29), release the lock of the LEVER BTM LOCK (PL20.3.27) to lift up the PLATE ASSY BTM. (Figure 20.21)
5) Slide the GUIDE ASSY SD L550 (PL20.3.11) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
6) Slide the GUIDE ASSY SD R550 (PL20.3.13) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
7) Remove the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on back, that secure the HOUSING TOP 550 to the HOUSING BASE 550 (PL20.3.44).
8) Release the 4 hooks of the HOUSING TOP 550, and remove the HOUSING TOP 550 together with the HOUSING EXTENSION 550 (PL20.3.42) from the HOUSING BASE 550.
9) Remove the 4 screws (gold tapping, 6mm) securing the COVER EXTENSION (PL20.3.31) to the HOUSING EXTENSION 550.
10) Remove the COVER EXTENSION from the HOUSING EXTENSION 550.
11) Remove the RACK SIZE (PL20.3.40). (RRP20.18)
12) Remove the GEAR SECTOR (PL20.3.39) (RRP20.19)
13) Release the hooks securing the GUIDE ASSY END 550 to the HOUSING EXTENSION 550 (PL20.3.42).

NOTE **Be careful handling the hooks of the GUIDE ASSY END 550. They are fragile and could break if given excessive force.**

14) Remove the GUIDE ASSY END 550 from the HOUSING EXTENSION 550.

Replacement

1) Secure the GUIDE ASSY END 550 to the HOUSING EXTENSION 550 (PL20.3.42) using the 4 hooks.
2) Install the GEAR SECTOR (PL20.3.39). (RRP20.19)
3) Install the RACK SIZE (PL20.3.40). (RRP20.18)
4) Install the COVER EXTENSION (PL20.3.31) to the HOUSING EXTENSION 550 using the 4 screws (gold tapping, 6mm).

NOTE **When installing, make sure the COVER EXTENSION is inserted under 3 claws of the HOUSING EXTENSION 550.**

NOTE **Use 6mm size of fixed screw. If 8mm size of screw is used, HOUSING EXTENSION 550 doesn't operate smoothly and LOCK EXTENSION 550 doesn't operate correctly.**

5) Install the HOUSING EXTENSION 550 and HOUSING TOP 550 (PL20.3.16) to the HOUSING BASE 550 while pushing the LINK SW SIZE1-550 (PL20.3.45), LINK SW SIZE2-550 (PL20.3.46) and LINK SW SIZE3-550 (PL20.3.47) of the HOUSING BASE 550 outward as shown in the figure. (Figure 20.18)

NOTE **Be sure to put 2 claws at the tip of the PLATE ASSY BTM under the hooks on the HOUSING TOP 550.**

6) After assembling the HOUSING TOP 550 with HOUSING BASE 550 using the 4 hooks, secure them using the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on back.

NOTE **After tightening the screws, move the GUIDE ASSY END 550 back and forth, and make sure that the LINK SW SIZEs operate smoothly.**

7) Insert the link lever of the GUIDE INDICATOR1 (PL4.1.34) into the hole of the PLATE ASSY BTM. (Figure 20.24)
8) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD R550 (PL20.3.13) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R550 sit correctly in the grooves of the HOUSING TOP 550.**

9) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD L550 (PL20.3.11) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L550 sit correctly in the grooves of the HOUSING TOP 550.**

10) Push the PLATE ASSY BTM downward to lock.
11) With completely opened GUIDE ASSY SD L550 and GUIDE ASSY SD R550 to the both sides, install the GEAR PINION (PL20.3.12) to the HOUSING TOP 550.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R550 and GUIDE ASSY SD L550 are completely opened. If not, the side register may be misaligned.**

12) Install the COVER CST (PL20.3.1) to the 550 PAPER CASSETTE.

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM.**

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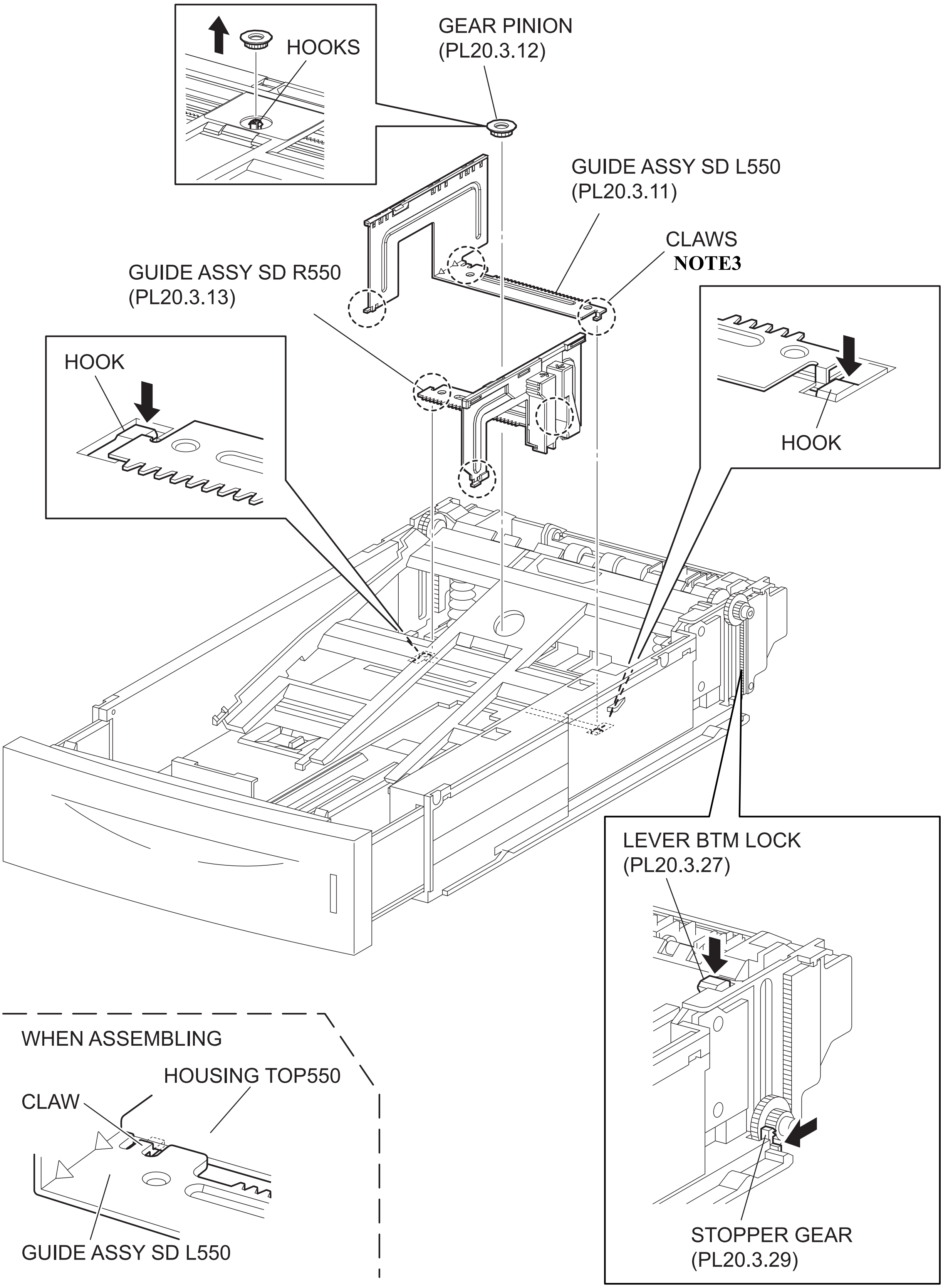
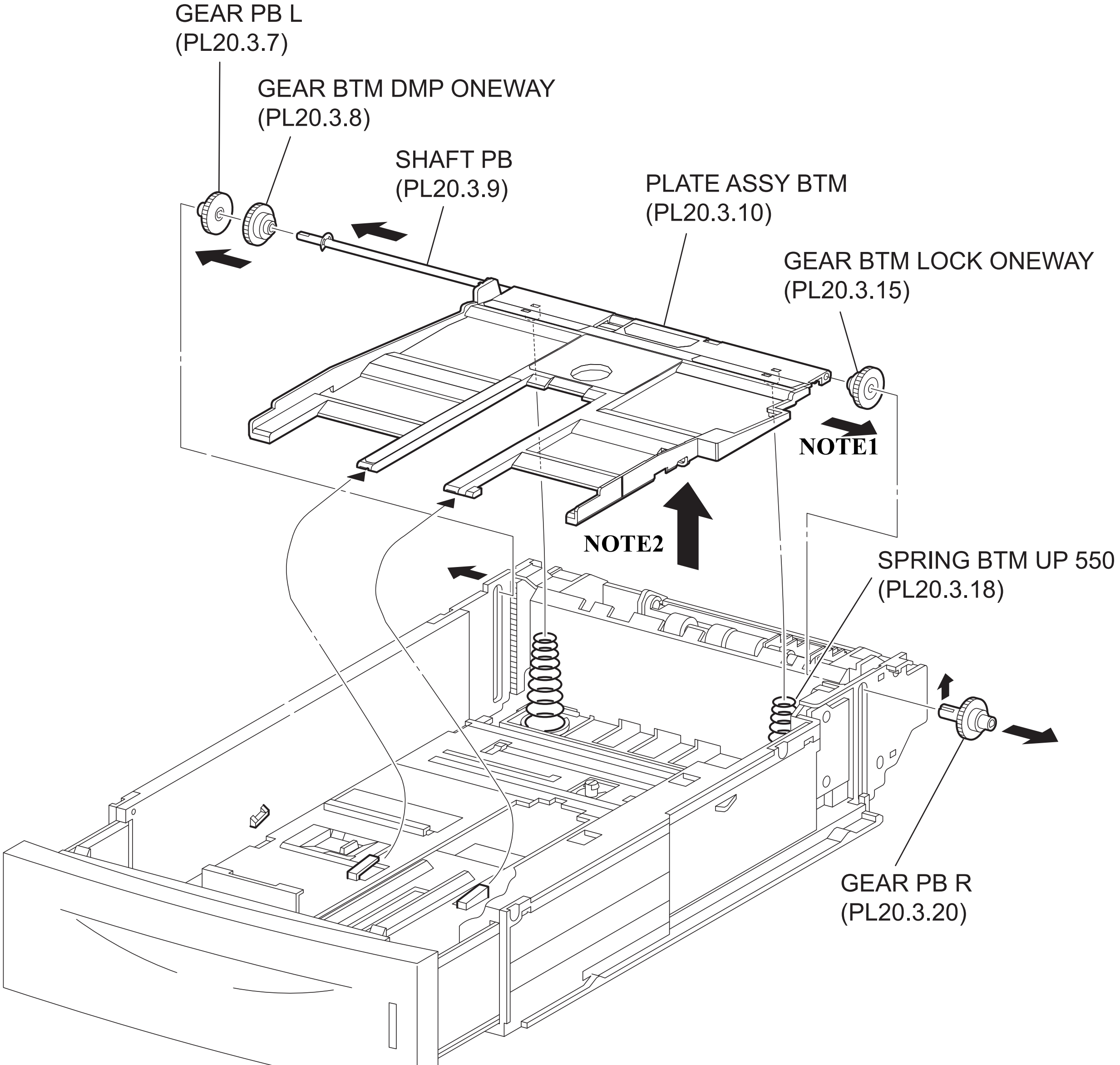
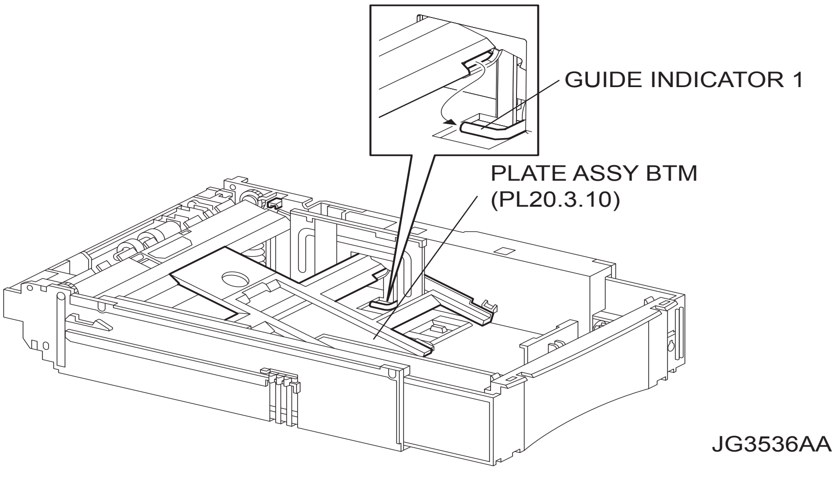
RRP20.21 PLATE ASSY BTM (PL20.3.10)


HOOKS
GEAR PINION
(PL20.3.12)
GUIDE ASSY SD L550
(PL20.3.11)
CLAWS
NOTE3
GUIDE ASSY SD R550
(PL20.3.13)
HOOK
HOOK
LEVER BTM LOCK
(PL20.3.27)
WHEN ASSEMBLING
HOUSING TOP550
CLAW
GUIDE ASSY SD L550
STOPPER GEAR
(PL20.3.29)

JG3524AA


GEAR PB L
(PL20.3.7)
GEAR BTM DMP ONEWAY
(PL20.3.8)
SHAFT PB
(PL20.3.9)
PLATE ASSY BTM
(PL20.3.10)
GEAR BTM LOCK ONEWAY
(PL20.3.15)
NOTE1
NOTE2
SPRING BTM UP 550
(PL20.3.18)
GEAR PB R
(PL20.3.20)

JG3525AB


GUIDE INDICATOR 1
PLATE ASSY BTM
(PL20.3.10)

JG3536AA

Removal

1) Remove the COVER CST (PL20.3.1) from the 550 PAPER CASSETTE (PL20.3.50).
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL20.3.12) to the HOUSING TOP 550 (PL20.3.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL20.3.29), release the lock of the LEVER BTM LOCK (PL20.3.27) to lift up the PLATE ASSY BTM.
5) Slide the GUIDE ASSY SD L550 (PL20.3.11) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
6) Slide the GUIDE ASSY SD R550 (PL20.3.13) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.

NOTE **In the following steps, the GEAR PB L (PL20.3.7), GEAR BTM DMP ONEWAY (PL20.3.8) and GEAR BTM LOCK ONEWAY (PL20.3.15) will be detached, and be careful not to lose these gears.**

7) Release the hook of the GEAR PB R (PL20.3.20), and remove the GEAR PB R from the SHAFT PB (PL20.3.9).

NOTE **It is hard to remove GEAR PB R. When removing it, be careful not to break it.**

8) Disengage the GEAR PB L from the PLATE GEAR LOCK 550 while bending the HOUSING BASE 550 in the direction of the arrow, and remove the PLATE ASSY BTM together with the SHAFT PB, GEAR PB L, GEAR BTM DMP ONEWAY and GEAR BTM LOCK ONEWAY from the HOUSING TOP 550.
9) Pull out the SHAFT PB from the PLATE ASSY BTM, and remove the GEAR PB L, GEAR BTM DMP ONEWAY and GEAR BTM LOCK ONEWAY.

Replacement

1) Insert the SHAFT PB (PL20.3.9) into the PLATE ASSY BTM, and insert the GEAR BTM DMP ONEWAY, GEAR PB L and GEAR BTM LOCK ONEWAY to the SHAFT PB.
2) While disengaging the GEAR PB L, install the assembled PLATE ASSY BTM to the HOUSING TOP 550 (PL20.3.16).

NOTE **When installing the PLATE ASSY BTM, be sure to put 2 SPRING BTM UP 550s (PL20.3.18) into the bosses on the back of the PLATE ASSY BTM.(NOTE1).**

NOTE **Be sure to put 2 claws at the tip of the PLATE ASSY BTM under the hooks on the HOUSING TOP 550.(NOTE2).**

3) Insert the link lever of the GUIDE INDICATOR1 (PL20.3.34) into the hole of the PLATE ASSY BTM.
4) Install the GEAR PB R (PL20.3.20) to the SHAFT PB, and secure it with the hook.

NOTE **Be sure to install the hook of the GEAR PB R into the groove of the SHAFT PB. (NOTE3).**

NOTE **When installing the PLATE GEAR LOCK 550, be sure to lift up the PLATE ASSY BTM. If the PLATE ASSY BTM is inclined, a paper skew or jam may occur. Check after the installation is completed.**

5) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD R550 (PL20.3.13) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R550 sit correctly in the grooves of the HOUSING TOP 550.**

6) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD L550 (PL20.3.11) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L550 sit correctly in the grooves of the HOUSING TOP 550.**

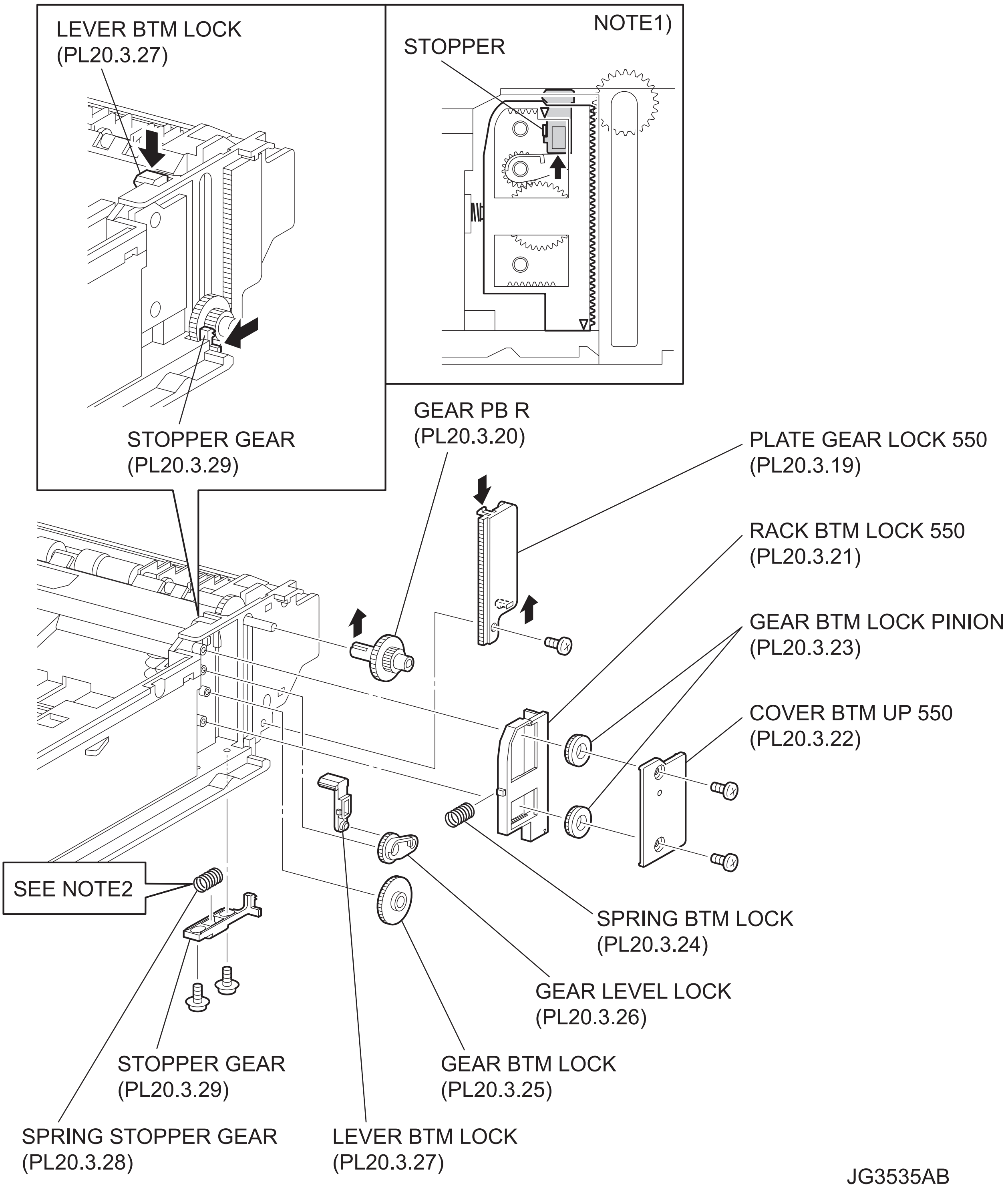
7) Push the PLATE ASSY BTM downward to lock.
8) Install the GEAR PINION (PL20.3.12) to the HOUSING TOP 550.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R550 and GUIDE ASSY SD L550 are completely opened. If not, the side register may be misaligned.**

9) Install the COVER CST (PL20.3.1) to the 550 PAPER CASSETTE.

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM.**

RRP20.22 GEAR LEVER LOCK (PL20.3.26), LEVER BTM LOCK (PL20.3.27)


LEVER BTM LOCK
(PL20.3.27)
NOTE1)
STOPPER
STOPPER GEAR
(PL20.3.29)
GEAR PB R
(PL20.3.20)
PLATE GEAR LOCK 550
(PL20.3.19)
RACK BTM LOCK 550
(PL20.3.21)
GEAR BTM LOCK PINION
(PL20.3.23)
COVER BTM UP 550
(PL20.3.22)
SEE NOTE2
SPRING BTM LOCK
(PL20.3.24)
GEAR LEVEL LOCK
(PL20.3.26)
STOPPER GEAR
(PL20.3.29)
GEAR BTM LOCK
(PL20.3.25)
SPRING STOPPER GEAR
(PL20.3.28)
LEVER BTM LOCK
(PL20.3.27)
JG3535AB

Removal

1) Remove the COVER CST (PL20.3.1) from the 550 PAPER CASSETTE (PL20.3.50).
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) While pressing down the lock of the STOPPER GEAR (PL20.3.29), release the lock of LEVER BTM LOCK (PL20.3.27) to lift up the PLATE ASSY BTM (PL20.3.10).
4) Remove the screw (gold tapping, 8mm) securing the PLATE GEAR LOCK 550 (PL20.3.19) at the GEAR PB R (PL20.3.20) side.
5) Release the hook of the PLATE GEAR LOCK 550, and remove it from the HOUSING BASE 550 (PL20.3.44).
6) Release the hook of the GEAR PB R, and remove the GEAR PB R from the SHAFT PB (PL20.3.9).
7) Remove the 2 screws (gold tapping, 6mm) securing the COVER BTM UP 550 (PL20.3.22), and remove it from the HOUSING BASE 550.
8) Remove 2 GEAR LOCK PINIONs (PL20.3.23) from the HOUSING BASE 550.
9) Remove the RACK BTM LOCK 550 (PL20.3.21) together with the SPRING BTM LOCK (PL20.3.24) from the HOUSING BASE 550.
10) Remove the GEAR BTM LOCK (PL 20.3.25) from the HOUSING BASE 550.
11) Remove the GEAR LEVER LOCK from the HOUSING BASE 550.
12) Remove the 2 screws (gold tapping, 6mm) securing the STOPPER GEAR (PL20.3.29), and remove the STOPPER GEAR and SPRING STOPPER GEAR (PL20.3.28) from the HOUSING BASE 550.

NOTE

When removing the STOPPER GEAR, be careful not to lose the SPRING STOPPER GEAR.

Replacement

NOTE

When installing, be sure to lift up the PLATE ASSY BTM. If the PLATE ASSY BTM is inclined, a paper skew or jam may occur. Check after the installation is completed.

1) Put the SPRING STOPPER GEAR (PL20.3.28) into the STOPPER GEAR (PL20.3.29), and secure the STOPPER GEAR to the HOUSING BASE 550 (PL20.3.44) using the 2 screws (gold tapping, 6mm).

NOTE

When installing the STOPPER GEAR, be careful not to lose the SPRING STOPPER GEAR.

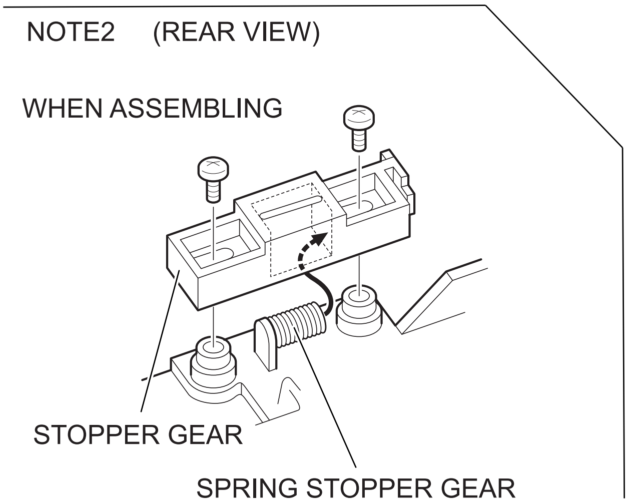
NOTE

Install the STOPPER GEAR so that one end of the SPRING STOPPER GEAR is in contact with the plate located on the back of the HOUSING BASE 550 as shown in the figure. (NOTE 2)

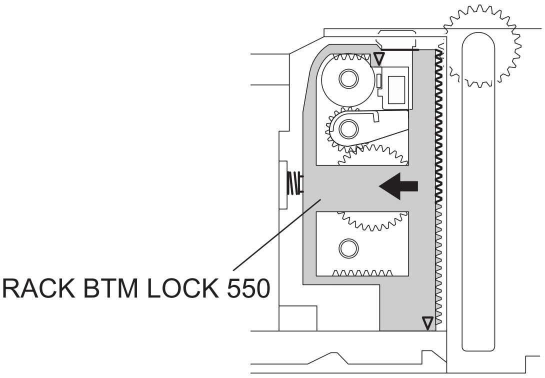
2) Install the GEAR LEVER LOCK to the HOUSING BASE 550.
3) Install the GEAR BTM LOCK (PL20.3.25) to the HOUSING BASE 550.
4) Install the SPRING BTM LOCK (PL20.3.24) to the projection of the RACK BTM LOCK 550 (PL20.3.21), and install them to the HOUSING BASE 550.

NOTE

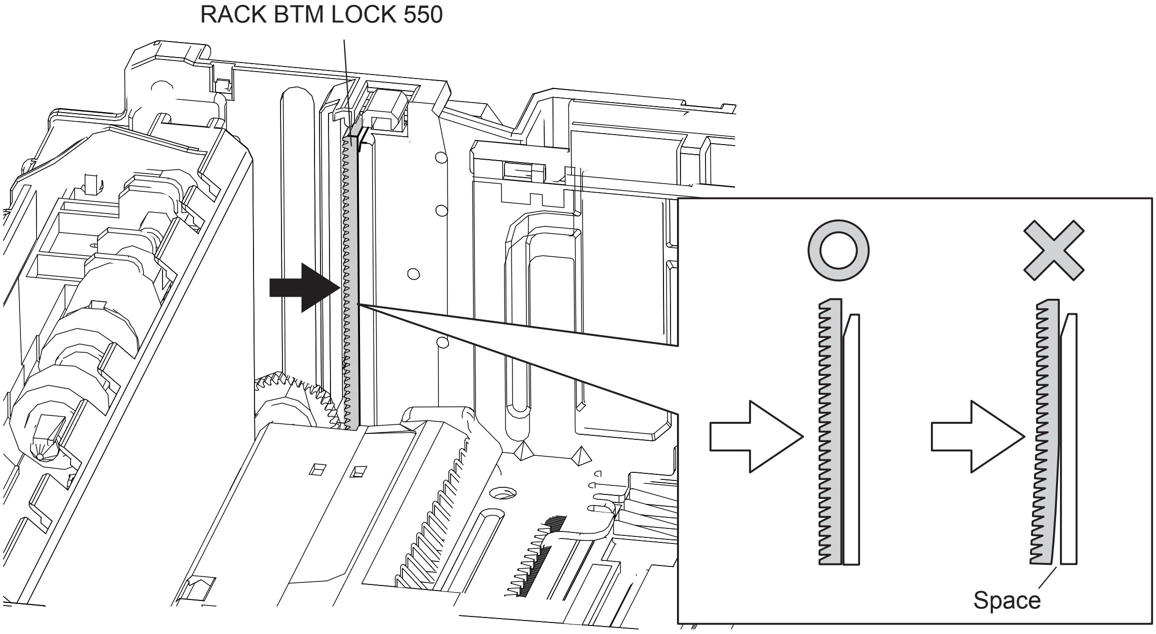
When installing the RACK BTM LOCK 550, be sure to install it with the LEVER BTM LOCK lifted up. After installing, check that the projection of the LEVER BTM LOCK hits the stopper of the HOUSING BASE 550 and the triangle mark is placed above the stopper, when pushing down the LEVER BTM LOCK and then release the finger from it. (NOTE1)


NOTE2 (REAR VIEW)
WHEN ASSEMBLING
STOPPER GEAR
SPRING STOPPER GEAR

JG3183AA


RACK BTM LOCK 550

JG3542AA


RACK BTM LOCK 550
Space

JG3544AA

5) Install 2 GEAR LOCK PINIONs (PL20.3.23) to the HOUSING BASE 550, and put them into the state of being in gear.

NOTE **Install the lower GEAR BTM PINION after installing the upper GEAR BTM LOCK PINION. When installing the lower GEAR BTM PINION, press RACK BTM LOCK 550 in the direction of arrow until it bumps into the edge. (NOTE3)**

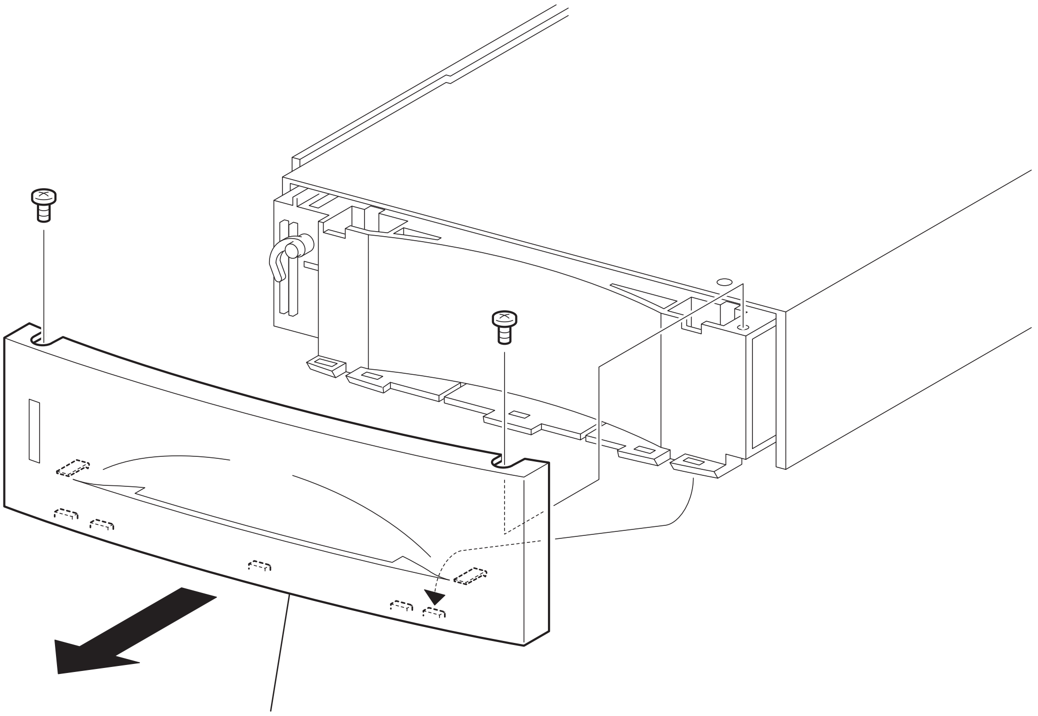
6) Secure the COVER BTM UP 550 (PL20.3.22) to the HOUSING BASE 550 using the screw (gold tapping, 6mm).
7) Install the GEAR PB R (PL20.3.20) to the SHAFT PB (PL20.3.9), and secure it with the hook.

NOTE **Be sure to install the hook of the GEAR PB R into the groove of the SHAFT PB.**

8) Install the PLATE GEAR LOCK 550 (PL20.3.19) to the HOUSING BASE 550, and secure it with the hook.
9) Secure the PLATE GEAR LOCK 550 using the screw (gold tapping, 8mm).
10) Push the PLATE ASSY BTM (PL20.3.10) downward to lock.

NOTE **Confirm that there is no space between RACK BTM LOCK 550 and HOUSING BASE 550 when pressing the center of RACK BTM LOCK 550 against HOUSING BASE 550.**

RRP20.23 HANDLE EXTENSION 550 (PL20.3.41)


HANDLE EXTENSION 550
(PL20.3.41)
JG3540AA

Removal

1) Remove the COVER CST (PL20.3.1) from the 550 PAPER CASSETTE (PL20.3.50).
2) Remove the 2 screws on the back side of the HANDLE EXTENSION 550 (PL20.3.41).
3) Release the 5 hooks at the upper side and the 2 hooks at the lower side of the HANDLE EXTENSION 550 (PL20.3.41). then, remove the HANDLE EXTENSION 550 from the HOUSING EXTENSION 550 (PL20.3.42).

NOTE

When removing the HANDLE EXTENSION 550, the LOW INDICATOR (PL20.3.37) and LOW IND FRONT (PL20.3.38) will be detached, and be careful not to lose them.

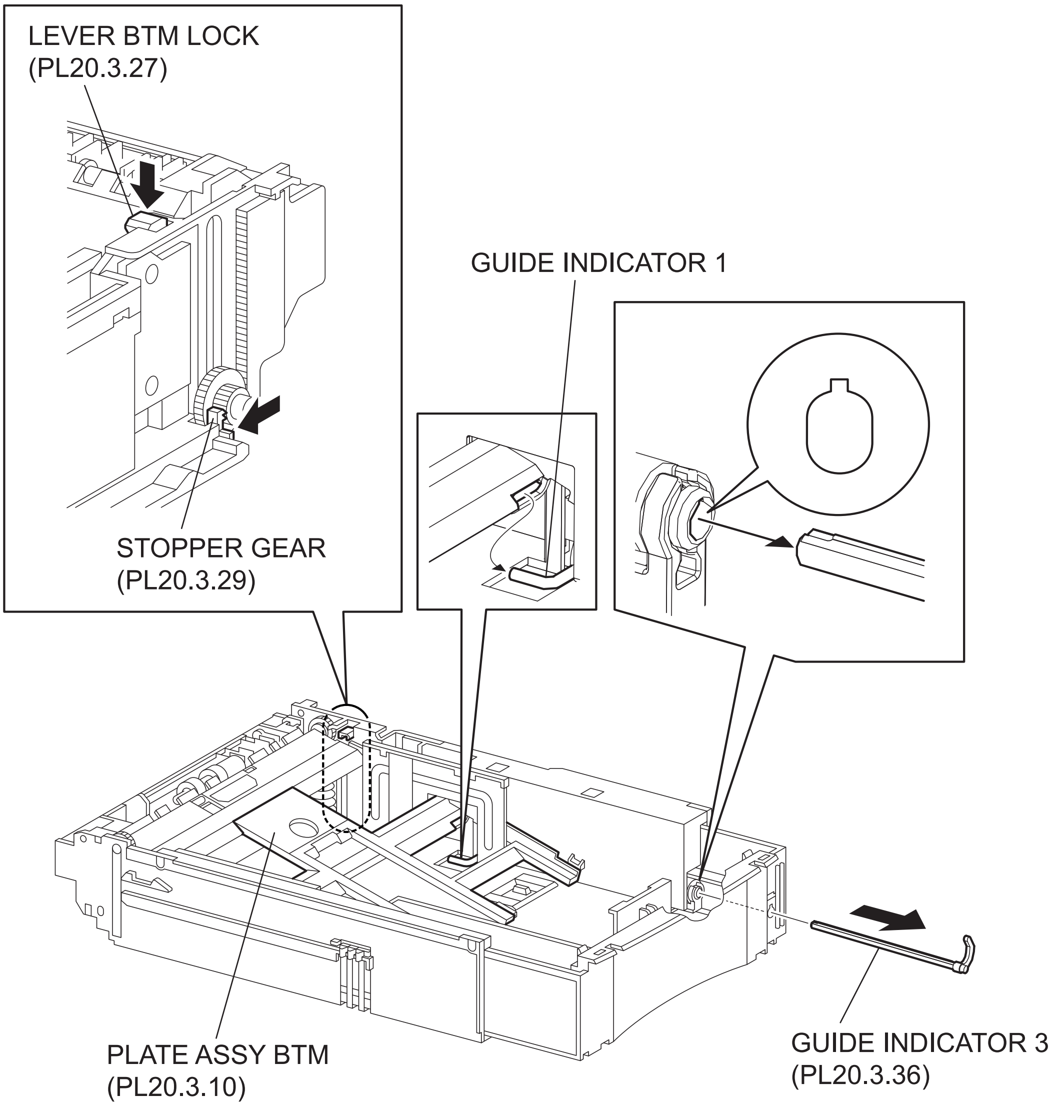
Replacement

1) Install the LOW INDICATOR (PL20.3.37) and LOW IND FRONT (PL20.3.38). (RRP20.26)
2) Put the 5 hooks on the upper side and 2 hooks on the lower side of the HANDLE EXTENSION 550 to the HOUSING EXTENSION 550 (PL20.3.42),
3) Secure the HANDLE EXTENSION 550 (PL20.3.41) to the HOUSING EXTENSION 550 (PL20.3.42) using the 2 screws.
4) Install the COVER CST (PL20.3.1) to the 550 PAPER CASSETTE.

NOTE

After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM.

RRP20.24 GUIDE INDICATOR 3 (PL20.3.36)


LEVER BTM LOCK
(PL20.3.27)
STOPPER GEAR
(PL20.3.29)
GUIDE INDICATOR 1
PLATE ASSY BTM
(PL20.3.10)
GUIDE INDICATOR 3
(PL20.3.36)
JG3527AA

Removal

1) Remove the COVER CST (PL20.3.1) from the 550 PAPER CASSETTE (PL20.3.50).
2) Remove the HANDLE EXTENSION 550 (PL20.3.41). (RRP20.23)

NOTE **When removing the HANDLE EXTENSION 550, the LOW INDICATOR (PL20.3.37) and LOW IND FRONT (PL20.3.38) will be detached. Be careful not to lose them.**

3) While pressing down the lock of the STOPPER GEAR (PL20.3.29), release the lock of the LEVER BTM LOCK (PL20.3.27) and lift up the PLATE ASSY BTM (PL20.3.10).
4) Remove the link lever of the GUIDE INDICATOR 1 (PL20.3.34) from the hole of the PLATE ASSY BTM.
5) While pressing the link lever down to the bottom side of the 550 PAPER CASSETTE, slowly but firmly draw the GUIDE INDICATOR 3 out from the front side of the HOUSING EXTENSION 550 (PL20.3.42).

Replacement

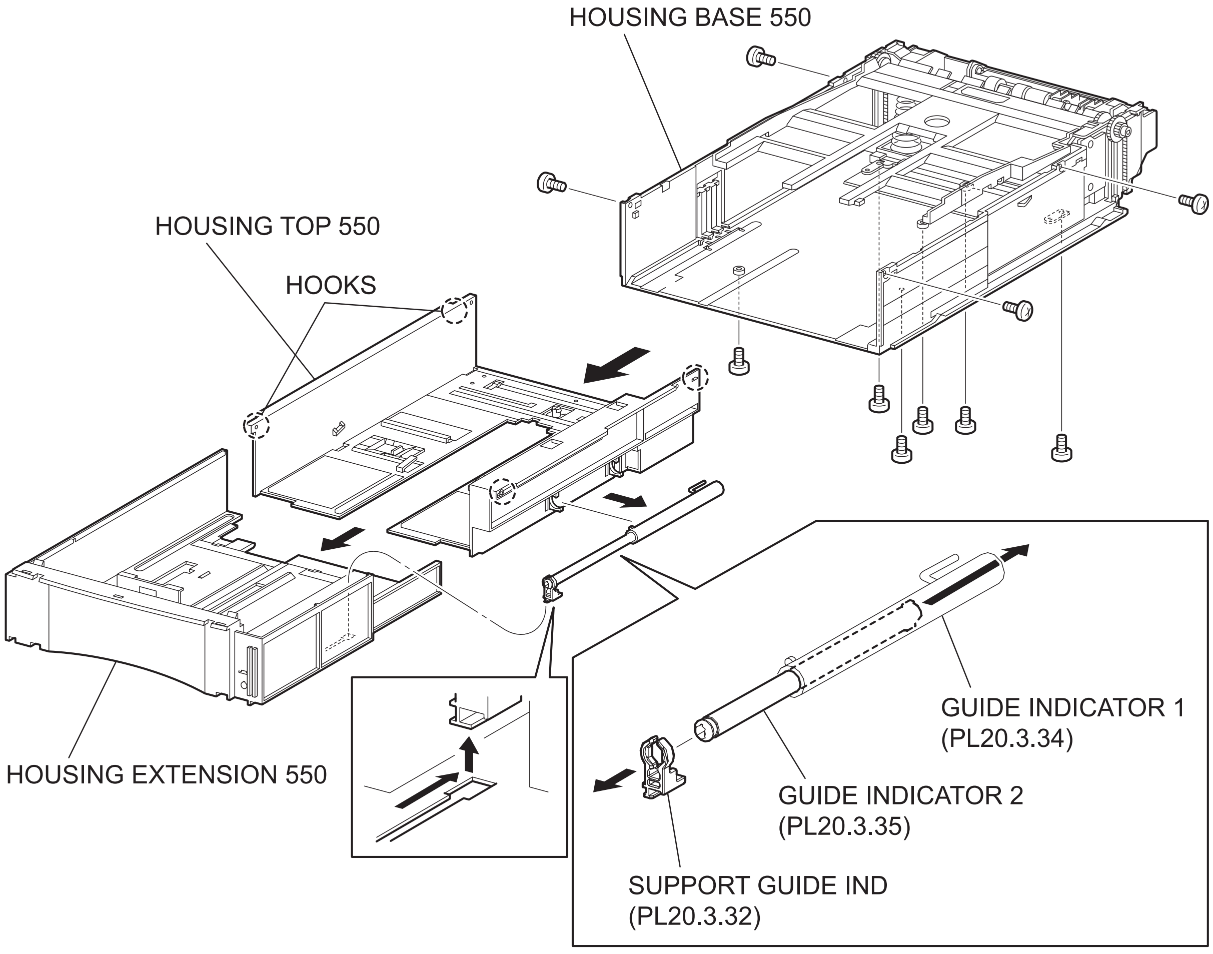
1) While pressing the link lever down to the bottom side of the 550 PAPER CASSETTE, insert the GUIDE INDICATOR 3 to the HOUSING EXTENSION 550 (PL20.3.42) from the front side.

NOTE **Be sure to align the groove of the GUIDE INDICATOR 1 and the projection of the GUIDE INDICATOR 3.**

2) Insert the link lever of the GUIDE INDICATOR 1 (PL20.3.34) to the hole of the PLATE ASSY BTM.
3) Install the LOW INDICATOR (PL20.3.37) and LOW IND FRONT (PL20.3.38). (RRP20.26)
4) Install the HANDLE EXTENSION 550 (PL20.3.41). (RRP20.23)
5) Install the COVER CST (PL20.3.1) to the 5550 PAPER CASSETTE.

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM**

RRP20.25 GUIDE INDICATOR 2 (PL20.3.35)


HOUSING BASE 550
HOUSING TOP 550
HOOKS
HOUSING EXTENSION 550
GUIDE INDICATOR 1
(PL20.3.34)
GUIDE INDICATOR 2
(PL20.3.35)
SUPPORT GUIDE IND
(PL20.3.32)

JG3528AA

Removal

1) Remove the COVER CST (PL20.3.1) from the 550 PAPERE CASSETTE (PL20.3.50).
2) Release the lock of the LOCK EXTENSION, and draw out the cassette extension as far as it will go.
3) Release the hooks securing the GEAR PINION (PL20.3.12) to the HOUSING TOP 550 (PL20.3.16), and remove the GEAR PINION.
4) While pressing down the lock of the STOPPER GEAR (PL20.3.29), release the lock of the LEVER BTM LOCK (PL20.31.27) to lift up the PLATE ASSY BTM. (Figure 20.24)
5) Slide the GUIDE ASSY SD L550 (PL20.3.11) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
6) Slide the GUIDE ASSY SD R550 (PL20.3.13) inward, and remove it from the HOUSING TOP 550 by pressing down the hook of the HOUSING TOP 550.
7) Remove the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on back, that secure the HOUSING TOP 550 to the HOUSING BASE 550 (PL20.3.44).
8) Turn the 550 PAPER CASSETTE over, and pull out the HOUSING TOP 550 forward about 20 mm to release the claws at the tip of the PLATE ASSY BTM from the hooks of the HOUSING TOP 550.
9) Release the 4 hooks of the HOUSING TOP 550, and remove the HOUSING TOP 550 and HOUSING EXTENSION 550 (PL20.3.42) from the HOUSING BASE 550.
10) Slide the SUPPORT GUIDE IND (PL20.3.32), and remove it from the groove of the HOUSING EXTENSION 550. Then, separate the HOUSING TOP 550 and HOUSING EXTENSION 550.
11) Remove the GUIDE INDICATOR 1 (PL20.3.34) from the hooks of the HOUSING TOP 550, and remove the SUPPORT GUIDE IND together with the GUIDE INDICATOR 1 and GUIDE INDICATOR 2 from the HOUSING TOP 550.
12) Release the hook of the SUPPORT GUIDE IND, and remove the SUPPORT GUIDE IND from the GUIDE INDICATOR 2.
13) Extract the GUIDE INDICATOR 2 from the back side of the GUIDE INDICATOR 1.

Replacement

1) Insert the GUIDE INDICATOR 2 into the hole of the GUIDE INDICATOR 1 (PL20.3.34) from back.
2) Install the SUPPORT GUIDE IND (PL20.3.32) to the GUIDE INDICATOR2, and secure it with the hook.

NOTE **Install the SUPPORT GUIDE IND to the GUIDE INDICATOR 2 in the direction shown in the figure.**

3) Install the SUPPORT GUIDE IND together with the GUIDE INDICATOR 1 and GUIDE INDICATOR 2 to the HOUSING TOP 550 (PL20.3.16), and secure the GUIDE INDICATOR 1 using the 2 hooks of the HOUSING TOP 550.
4) Slide the SUPPORT GUIDE IND along the groove of the HOUSING EXTENSION 550 to install, and assemble the HOUSING TOP 550 and HOUSING EXTENSION 550 into 1 unit.
5) Install the HOUSING EXTENSION 550 and HOUSING TOP 550 (PL20.3.16) to the HOUSING BASE 550 while pushing the LINK SW SIZE1-550 (PL20.3.45), LINK SW SIZE2-550 (PL20.3.46) and LINK SW SIZE3-550 (PL20.3.47) of the HOUSING BASE 550 outward as shown in the figure.(Figure 20.18)

NOTE **Be sure to put 2 claws at the tip of the PLATE ASSY BTM under the hooks on the HOUSING TOP 550.**

6) After assembling the HOUSING TOP 550 with HOUSING BASE 550 using the 4 hooks, secure them using the 2 screws (gold tapping, 8mm) from both right and left sides, as well as the 6 screws (gold tapping, 8mm) on back.

NOTE **After tightening the screws, move the GUIDE ASSY END 550 back and forth, and make sure that the LINK SW SIZEs operate smoothly.**

7) Insert the link lever of the GUIDE INDICATOR1 (PL20.3.34) into the hole of the PLATE ASSY BTM.

8) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD R550 (PL20.3.13) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD R550 sit correctly in the grooves of the HOUSING TOP 550.**

9) While pressing down the hook of the HOUSING TOP 550, install the GUIDE ASSY SD L550 (PL20.3.11) to the HOUSING TOP 550.

NOTE **After installing, make sure that the 3 claws of the GUIDE ASSY SD L550 sit correctly in the grooves of the HOUSING TOP 550.**

10) Push the PLATE ASSY BTM downward to lock.

11) Install the GEAR PINION (PL20.31.12) to the HOUSING TOP 550.

NOTE **When installing the GEAR PINION, make sure the GUIDE ASSY SD R550 and GUIDE ASSY SD L550 are completely opened. If not, the side register may be misaligned.**

12) Install the COVER CST (PL20.3.1) to the 550 PAPER CASSETTE.

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM**

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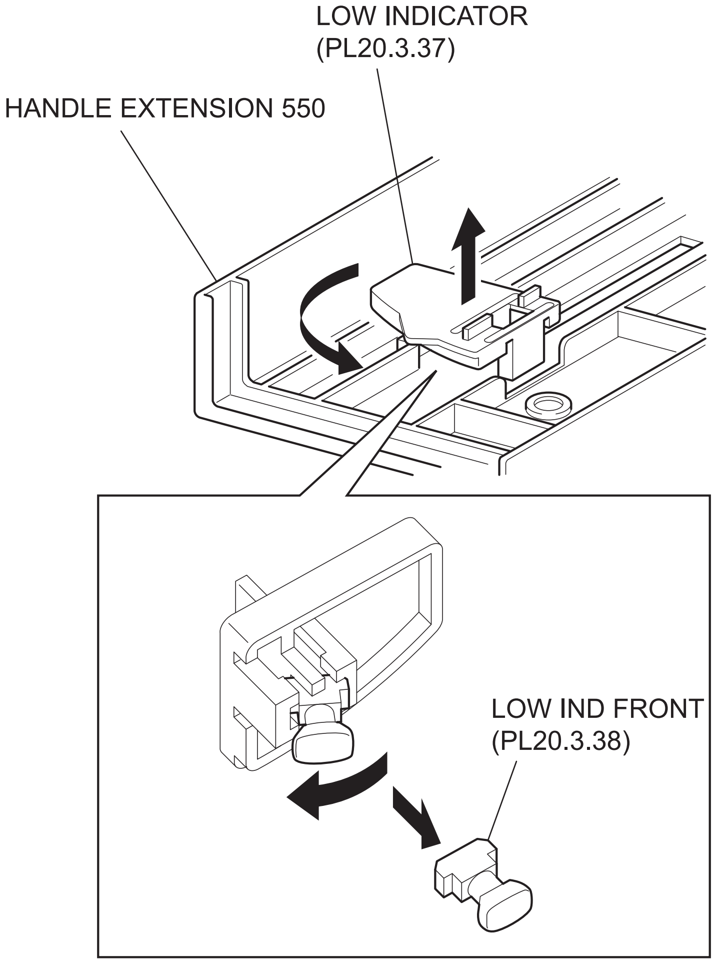
RRP20.26 LOW IND FRONT (PL20.3.38)


LOW INDICATOR
(PL20.3.37)
HANDLE EXTENSION 550
LOW IND FRONT
(PL20.3.38)

JG3029AB

Removal

1) Remove the COVER CST (PL20.3.1) from the 550 PAPER CASSETTE (PL20.3.50).
2) Remove the HANDLE EXTENSION 550 (PL20.3.41). (RRP20.23)
3) Turn the LOW INDICATOR (PL20.3.37) by 90 degrees, and remove it together with the LOW IND FRONT from the HANDLE EXTENSION 550.
4) Release the hook on the one side of the LOW IND FRONT, and remove the LOW IND FRONT from the LOW INDICATOR.

Replacement

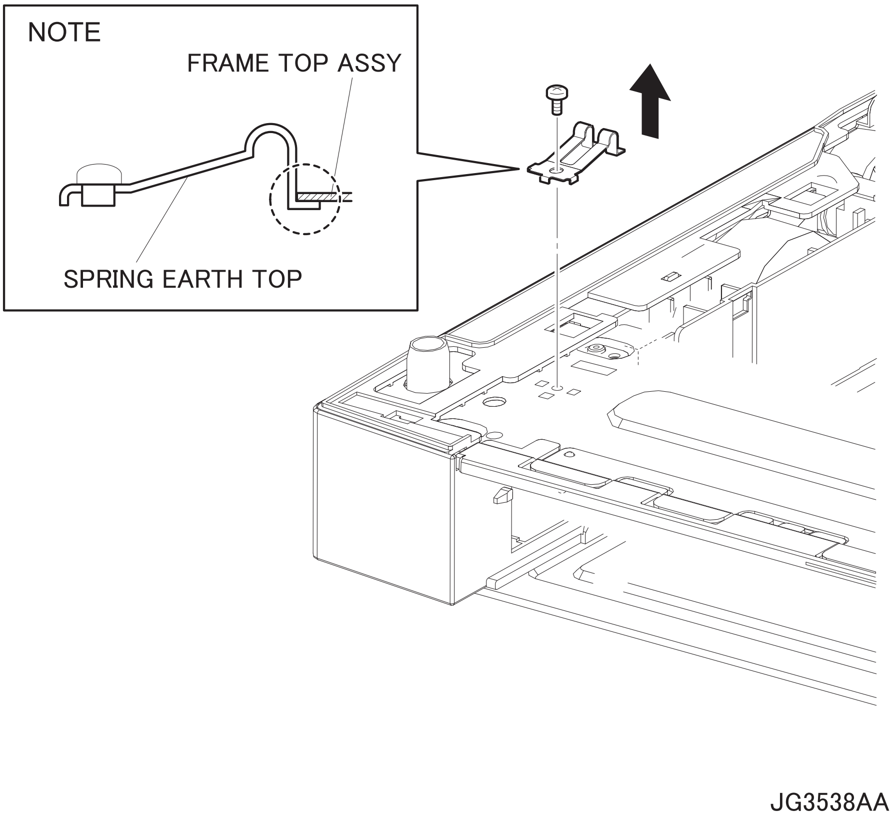
1) Install the LOW INDICATOR (PL20.3.37) to the LOW INDICATOR.

NOTE **When installing the LOW IND FRONT to the LOW INDICATOR, be careful in the installing direction of the LOW IND FRONT.**

2) Turn the LOW INDICATOR by 90 degrees in the opposite direction of the arrow, and install it together with the LOW IND FRONT to the HANDLE EXTENSION 550.
3) Install the HANDLE EXTENSION 550 (PL20.3.41). (RRP20.23)
4) Install the COVER CST (PL20.3.1) to the 550 PAPER CASSETTE (PL20.3.50).

NOTE **After assembling, make sure that the LOW IND FRONT moves up-and-down in conjunction with the up-and-down movement of the PLATE ASSY BTM**

RRP20.27 SPRING EARTH TOP (PL20.1.6)


NOTE
FRAME TOP ASSY
SPRING EARTH TOP
JG3538AA

Removal

1) Remove the screw (silver, 6mm) securing the SPRING EARTH TOP to the FRAME TOP ASSY (PL20.1.7).
2) Remove the SPRING EARTH TOP.

Replacement

1) Put the tip of the SPRING EARTH TOP into the hole of the FRAME TOP ASSY (PL20.1.7), and secure it using the screw (silver, 6mm).

NOTE **The tip of the SPRING EARTH TOP should be put into the hole and should not be on the FRAME TOP ASSY.**

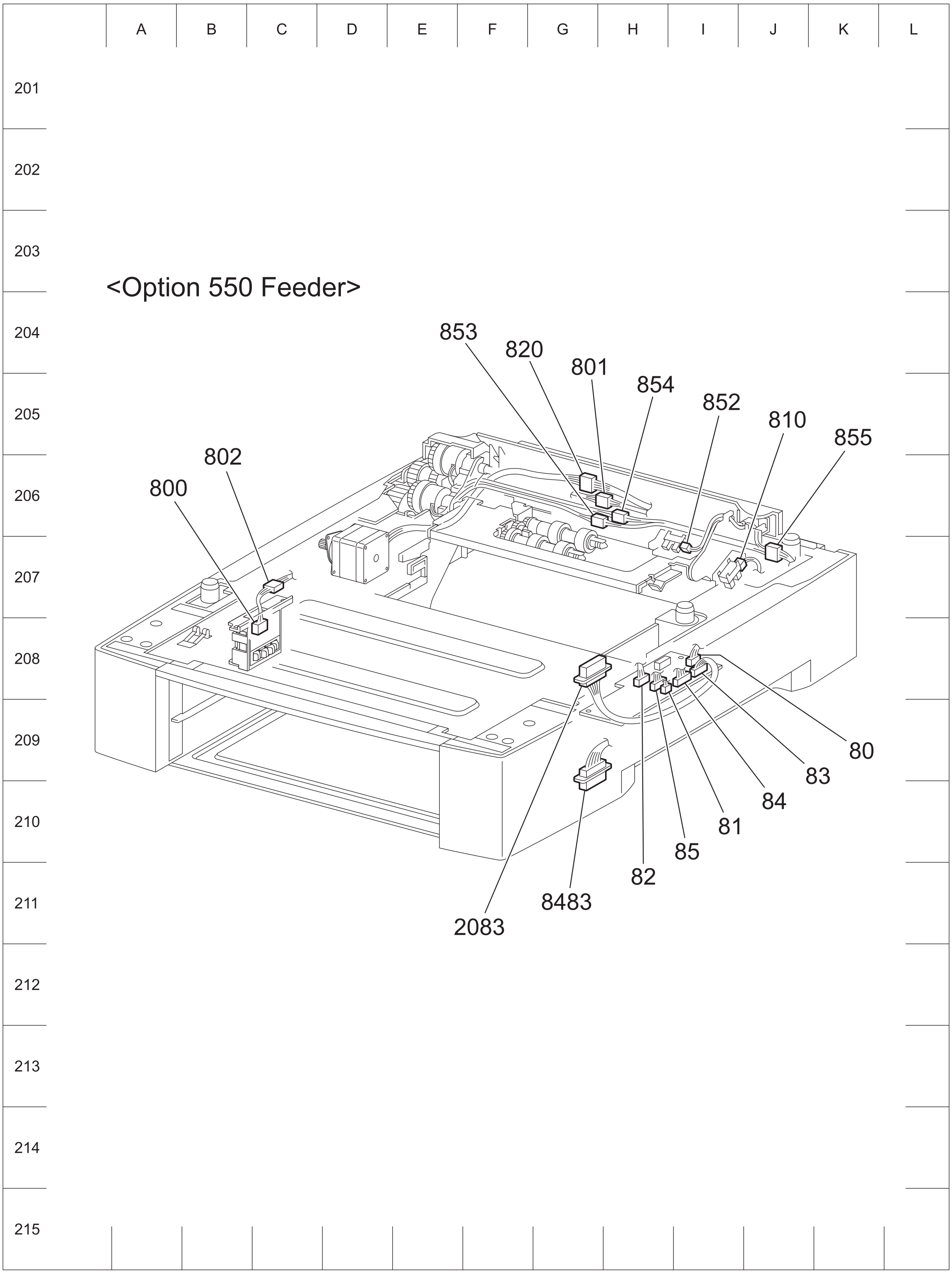
NOTE **After installation, when the top of the SPRING EARTH TOP is depressed, make sure that it moves downward.**

4. Connector [P (plug) / J (jack)]

4.1 List of P/J

P/J	Coordiates	Remarks
80	I-208	Connects HARNESS ASSY SIZE FDR2 and PWBA FEEDER 550
81	H-208	Connects HARNESS LOW PAPER and PWBA FEEDER 550
82	H-208	Connects HARNESS ASSY FDR MOT and PWBA FEEDER 550
83	I-208	Connects HARNESS ASSY FDR2 and PWBA FEEDER 550
84	I-208	Connects HARNESS ASSY FDR5 and PWBA FEEDER 550
85	H-208	Connects HARNESS ASSY CLSNR2 and PWBA FEEDER 550
800	C-208	Connects HARNESS ASSY FDR3 and OPT ASSY SIZE
801	H-206	Connects HARNESS ASSY SIZE FDR1 and HARNESS ASSY SIZE FDR2
802	C-207	Connects HARNESS ASSY SIZE FDR1 and HARNESS ASSY FDR3
810	J-207	Connects SENSOR LOW PAPER and HARNESS LOW PAPER
820	G-206	Connects MOTOR FEEDER and HARNESS ASSY FDR MOT
852	I-207	Connects SENSOR NO PAPER and HARNESS ASSY CLSNR1
853	G-206	Connects CLUTCH ASSY PH and HANESS ASSY CLSNR1
854	H-206	Connects CLUTCH ASSY PR-REGI and HARNESS ASSY CLSNR1
855	J-207	Connects HARNESS ASSY CLSNR1 and HARNESS ASSY CLSNR2
2083	G-208	Connects HARNESS ASSY FDR2 (Engine) and HARNESS ASSY FDR2 (Feeder)
8483	G-209	Connects HARNESS ASSY FDR5 and HARNESS ASSY FDR5

4.2 P/J layout diagram

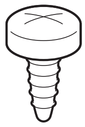
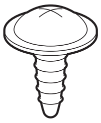
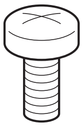
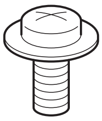
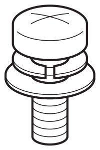
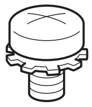
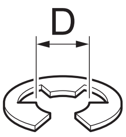

A
B
C
D
E
F
G
H
I
J
K
L
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
<Option 550 Feeder>
853
820
801
854
852
810
855
802
800
80
83
84
81
85
82
8483
2083

J24501SA

5. Parts List

5.1 Caution for use of parts list

- The figures indicating the illustrations are the item No. in the list and present correspondence between the illustrations and parts.
- The notation of PL "X.Y.Z" is composed of the plate (PL), item "X.Y", and parts "Z".
- The alphabet characters in the illustrations represent screws and clips as follows:

Type	Shape	PL No.	Size	PARTS No.
Screw for plastic Silver, tapping		S1	M3X6mm	153W27678
		S2	M3X8mm	153W27878
		S3	M3X30mm	826E11030
		S4	M3X29mm	826E29000
		S5	M3X22mm	826E13551
Screw for plastic Silver, with flange, tapping		S6	M3X8mm	826E13590
Screw for metal sheet Silver		S7	M3X6mm	026E14990
		S8	M3X6mm	026E16550
		S9	M3X6mm	826E12480
		S10	M3X10mm	826E22420
Screw for metal sheet Silver, with flange		S11	M3X8mm	026E87840
		S12	M3X8mm	826E22380
Screw for metal sheet Silver, with lock washer		S13	M3X8mm	112W27898
		S14	M3X10mm	112W28098
Screw for metal sheet Silver, with an external tooth washer		S15	M4X5mm	826E25640
Ring-E		E1	D3	354W21278
		E2	D4	354W24278

- "t" mark in the illustrations are attached to items indicating assembly parts in the illustrations.
- Encircled alphabetical figures in the illustrations indicate interrupted leader lines. Same characters in the illustrations represent lines to be connected.
- The mark "(with 2-5)" attached to assembly parts on the illustrations and lists represents that the items "2, 3, 4, and 5" of that plate are contained and the mark "(with 2-5, PL6.1.1) represent that the item "2, 3, 4, and 5" of that plate and the item "1" of the plate "6.1" are contained.
- The mark "[Same PLX.Y.Z]" attached to parts in the illustrations and lists resents that the parts is the same as the parts of the item "Z" of the plate "X.Y".

- The mark "H" attached to the item in the list represents "recommended spare parts" which can be usually supplied. (Supply of other parts shall be examined separately.)
- The mark "[" attached to parts in the list represents "Note" or "Reference" about that parts is contained in the same page.
- "HIGH ASSY" in the list represent the high level assembly parts containing that parts.

NOTE

For spare parts, refer to the "Spare parts list" which is issued separately.

NOTE

For the connector (P/J), parts such as harness, wire, etc. in the list, refer to "Chapter 7, Wiring Diagrams and Signal Information"

NOTE

It should be noted that configuration of parts may be different or some parts are not used depending on specifications of OEM.

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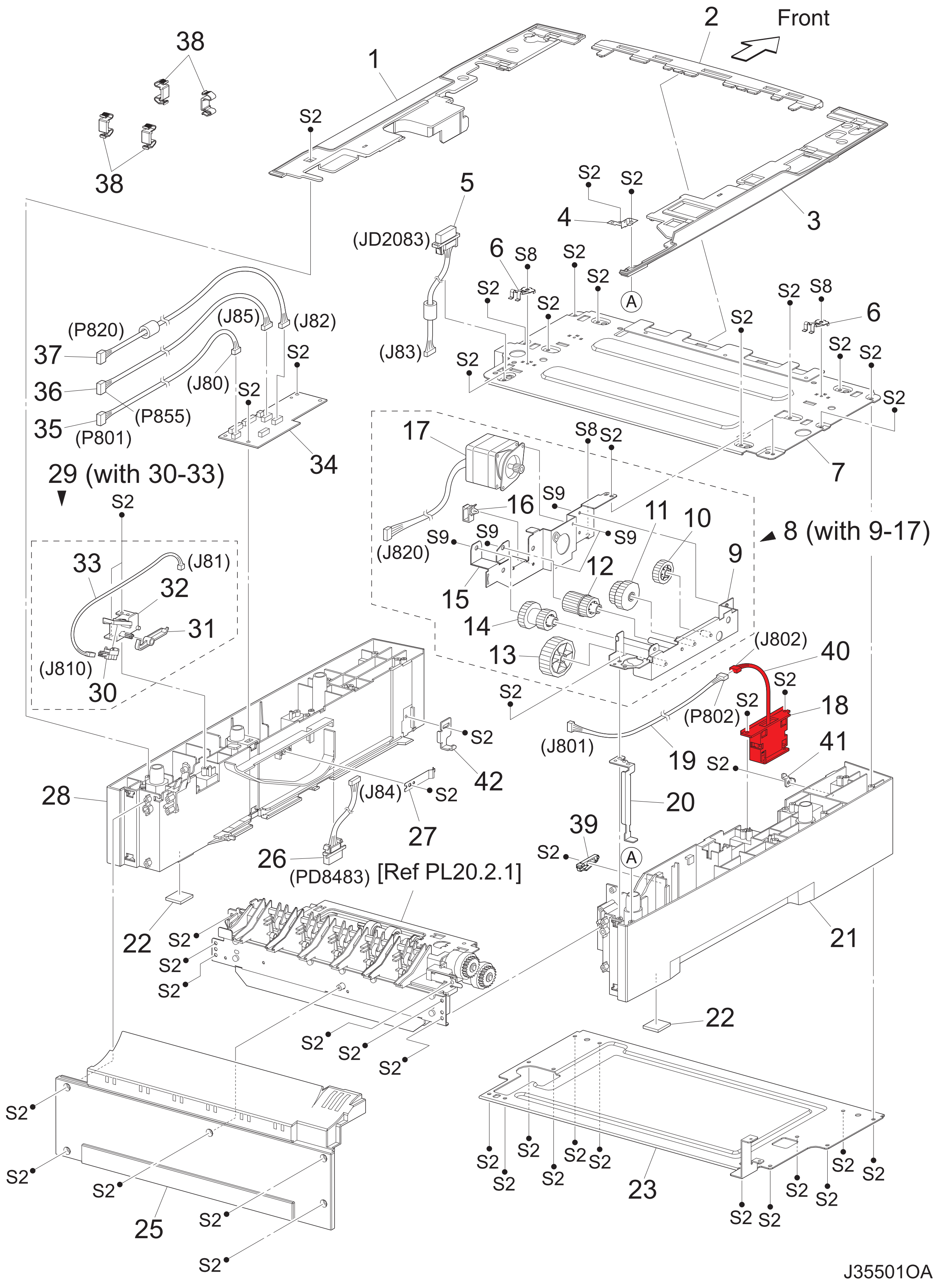
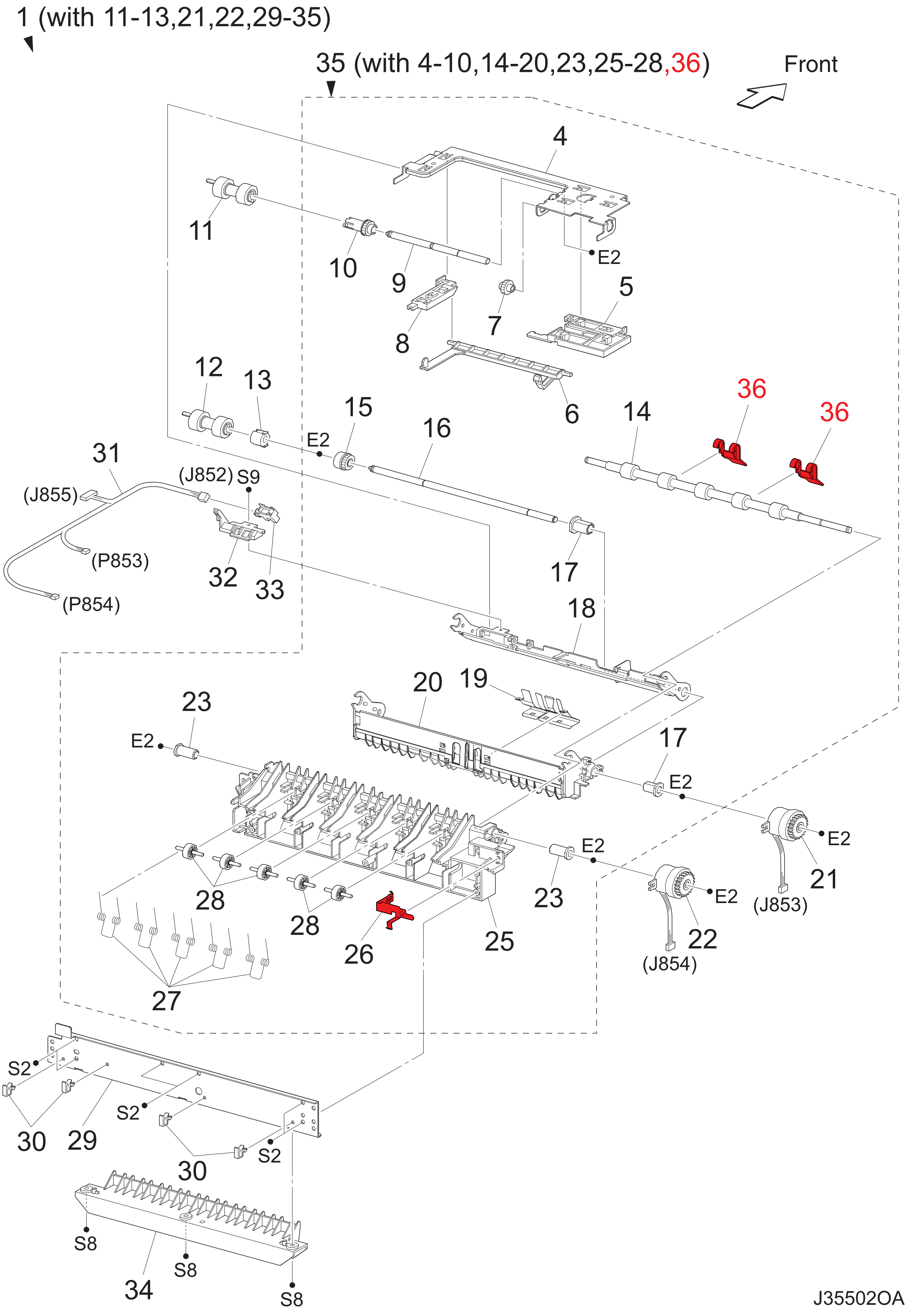
PL20.1 Option 550 Paper Feeder (1/2) [Illustration]


Front
1
2
3
4
5
(JD2083)
(J83)
6
7
8 (with 9-17)
9
10
11
12
13
14
15
16
17
(J820)
18
19
(J801)
(P802)
(J802)
20
21
22
23
25
26
(PD8483)
[Ref PL20.2.1]
27
(J84)
28
29 (with 30-33)
30
31
32
33
(J81)
(J810)
34
35
(P801)
36
(P855)
37
(P820)
(J85)
(J82)
(J80)
38
39
40
41
42
A
S2
S8
S9
J35501OA

PL20.1 Option 550 Paper Feeder (1/2) [List]

Item	Parts name
1	COVER RIGHT PLATE
2	COVER FRONT
3	COVER LEFT PLATE
4	EARTH PLATE
5	HARNESS ASSY FDR2 (J83-JD2083)
6	SPRING EARTH TOP
7	FRAME TOP ASSY
8	DRIVE ASSY OPT FDR 45 (with 9-17)
9	BRACKET ASSY FDR DRV 45
10	GEAR OPT FDR2
11	GEAR OPT FDR3
12	GEAR OPT FDR4
13	GEAR OPT FDR5
14	GEAR OPT FDR6
15	PLATE OPT FDR DRV 45
16	CLAMP-5V0
17	MOTOR ASSY OPT FDR 45 (J820)
18	OPT ASSY SIZE (P800)
19	HARNESS ASSY SIZE FDR1 (P802-J801)
20	PLATE EARTH 550
21	FRAME CVR L550
22	FOOT
23	FRAME BASE FRONT
24	- -
25	COVER RE550
26	HARNESS ASSY FDR5 (J84-PD8483)
27	PLATE CST LOCK
28	FRAME CVR R550
29	HLD LOW PAPER ASSY (with 30-33)
30	SENSOR LOW PAPER (P810)
31	ACTUATOR LOW PAPER
32	HOLDER LOW PAPER
33	HARNESS LOW PAPER (J81-J810)
34	PWBA FEEDER 550
35	HARNESS ASSY SIZE FDR2 (J80-P801)
36	HARNESS ASSY CLSNR2 (J85-P855)
37	HARNESS ASSY FDR MOT (J82-P820)
38	JOINT FEEDER
39	LOCK CST L
40	HARNESS ASSY SIZE FDR3 (J802-J800)
41	STOPPER TRAY L
42	STOPPER TRAY R

PL20.2 Option 550 Paper Feeder (2/2) [Illustration]

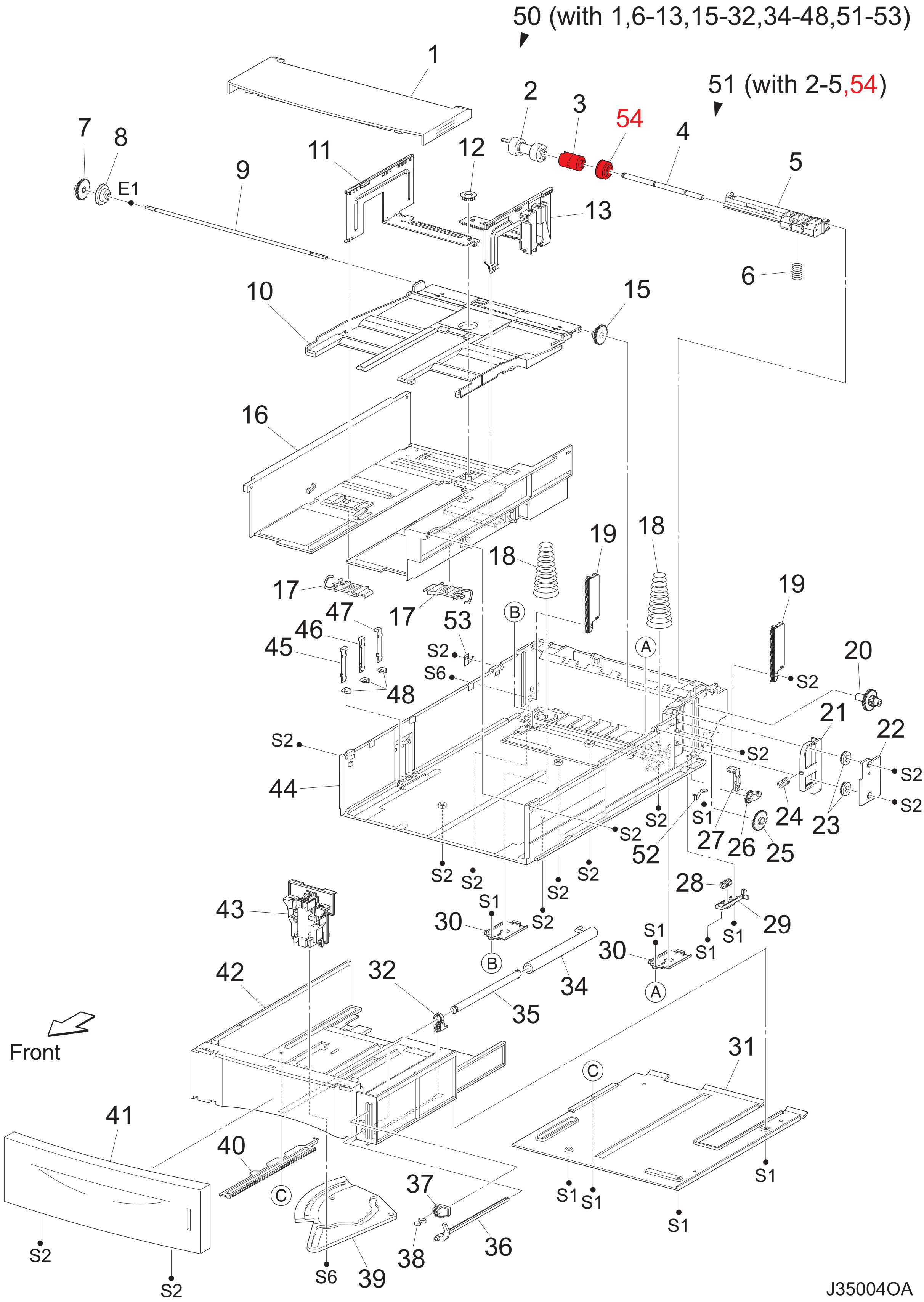

1 (with 11-13,21,22,29-35)
35 (with 4-10,14-20,23,25-28,36)
Front
4
11
10
9
E2
5
7
8
12
13
6
14
36
36
15
E2
16
31
(J852)
S9
(J855)
(P853)
32
33
17
(P854)
18
20
19
23
E2
17
E2
E2
21
E2
23
28
28
26
25
(J853)
E2
22
(J854)
27
S2
30
29
S2
S2
30
S8
S8
34
S8
J35502OA

PL20.2 Option 550 Paper Feeder (2/2) [List]

Item	Parts name
1	550 FEEDER OPTION (with 11-13,21,22,29-35)
2	- -
3	- -
4	SUPPORT NUDGER
5	HOLDER LEFT
6	ACTUATOR NO PAPER
7	GEAR IDLER NUDGER
8	HOLDER RIGHT
9	SHAFT NUDGER
10	GEAR NUDGER
11	ROLL ASSY NUDGER *1
12	ROLL ASSY FEED *1
13	CLUTCH ONEWAY FEED
14	ROLL ASSY TURN
15	CLUTCH ONEWAY NUDGER
16	SHAFT FEED
17	BEARING NUDGER
18	CHUTE TOP ASSY
19	COVER ACTUATOR
20	CHUTE BTM ASSY
21	CLUTCH ASSY PH (J853)
22	CLUTCH PR-REGI (J854)
23	BEARING FEEDER
24	- -
25	CHUTE OUT
26	SPRING EARTH
27	SPRING PINCH TURN
28	ROLL PINCH TURN
29	PLATE TIE
30	CLAMP-5V0
31	HARNESS ASSY CLSNR1 (J855-J852,P853,P854)
32	HOLDER NO PAPER SENSOR
33	SENSOR NO PAPER (P852)
34	CHUTE 550LOWER
35	FDR3 AS SUB 550 A4 (with 4-10,14-20,23,25-28,36)
36	GUARD TURN ROLL

*1: Periodical Replacement parts (per 200k print)
3sets [1] of PL20.2.11,12,PL20.3.2

PL20.3 Option 550 Paper Cassette [Illustration]


50 (with 1,6-13,15-32,34-48,51-53)
51 (with 2-5,54)
1
2
3
54
4
5
7
8
E1
9
11
12
13
6
10
15
16
19
18
18
19
17
47
17
53
46
45
48
S2
S6
B
A
20
S2
21
22
S2
S2
S2
S2
44
S2
S1
24
23
27
26
25
52
S2
S2
S2
S2
S2
S2
S1
28
43
30
S2
29
S1
S1
S1
30
B
A
42
32
34
35
Front
31
C
41
40
C
37
S1
S1
S1
S1
S2
38
36
S2
S6
39
J35004OA

PL20.3 Option 550 Paper Cassette [List]

Item	Parts name
1	COVER CST
2	ROLL ASSY RETARD *1
3	FRICTION CLUTCH
4	SHAFT RETARD
5	HOLDER RETARD
6	SPRING RETARD
7	GEAR PB L
8	GEAR BTM DMP ONEWAY
9	SHAFT PB
10	PLATE ASSY BTM
11	GUIDE ASSY SD L550
12	GEAR PINION
13	GUIDE ASSY SD R550
14	- -
15	GEAR BTM LOCK ONEWAY
16	HOUSING TOP 550
17	LOCK EXTENSION
18	SPRING BTM UP 550
19	PLATE GEAR LOCK 550
20	GEAR PB R
21	RACK BTM LOCK 550
22	COVER BTM UP 550
23	GEAR BTM LOCK PINION
24	SPRING BTM LOCK
25	GEAR BTM LOCK
26	GEAR LEVER LOCK
27	LEVER BTM LOCK
28	SPRING STOPPER GEAR
29	STOPPER GEAR
30	PLATE SUPPORT
31	COVER EXTENSION
32	SUPPORT GUIDE IND
33	- -
34	GUIDE INDICATOR 1
35	GUIDE INDICATOR 2
36	GUIDE INDICATOR 3
37	LOW INDICATOR
38	LOW IND FRONT
39	GEAR SECTOR
40	RACK SIZE
41	HANDLE EXTENSION 550
42	HOUSING EXTENSION 550
43	GUIDE ASSY END 550
44	HOUSING BASE 550
45	LINK SW SIZE1-550
46	LINK SW SIZE2-550
47	LINK SW SIZE3-550
48	LINK SW SIZE LOW
49	- -
50	550 PAPER CASSETTE (with 1,6-13,15-32,34-48,51-53)
51	HOLDER ASSY RETARD (with 2-5,54)
52	STOPPER BASE R
53	STOPPER BASE L
54	COLLAR

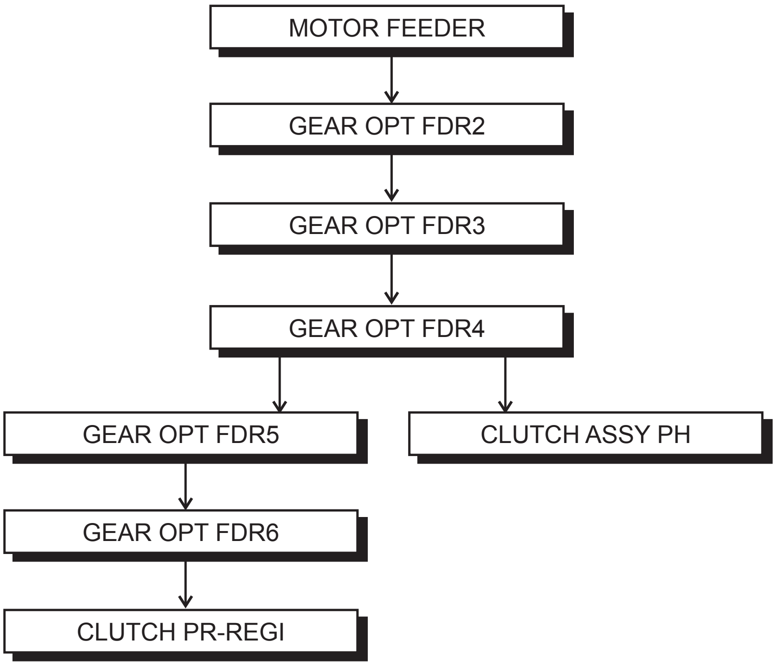
*1: Periodical Replacement parts (per 200k print)
3sets [1] of PL20.2.11,12,PL20.3.2

6. Principle of Operation

6.1 Driving Force Transmission Path

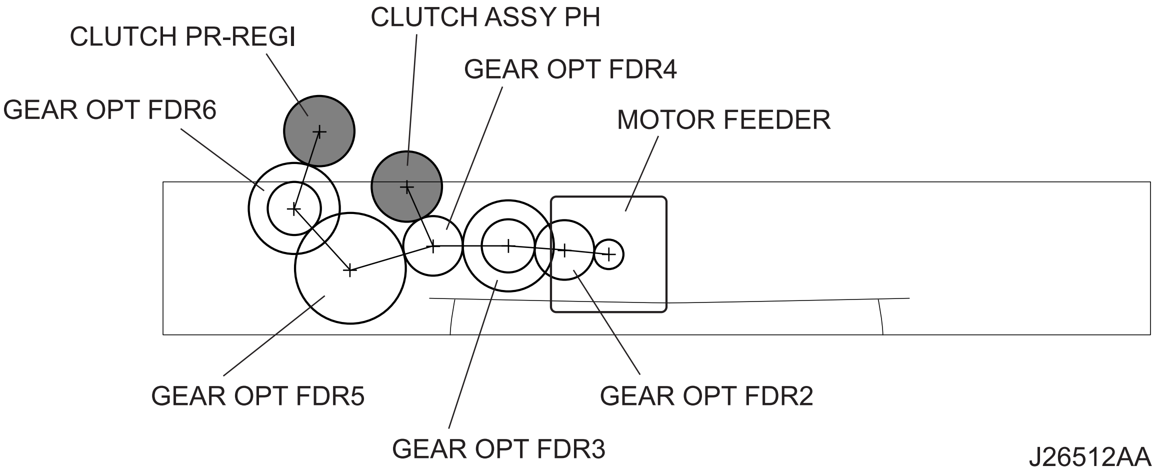
6.1.1 MOTOR FEEDER

The rotating force of the MOTOR FEEDER is transmitted via various gears to components that need mechanical driving force as shown in the flow given below.


MOTOR FEEDER
GEAR OPT FDR2
GEAR OPT FDR3
GEAR OPT FDR4
GEAR OPT FDR5
CLUTCH ASSY PH
GEAR OPT FDR6
CLUTCH PR-REGI

JG6511AA

6.1.2 Gear Layout

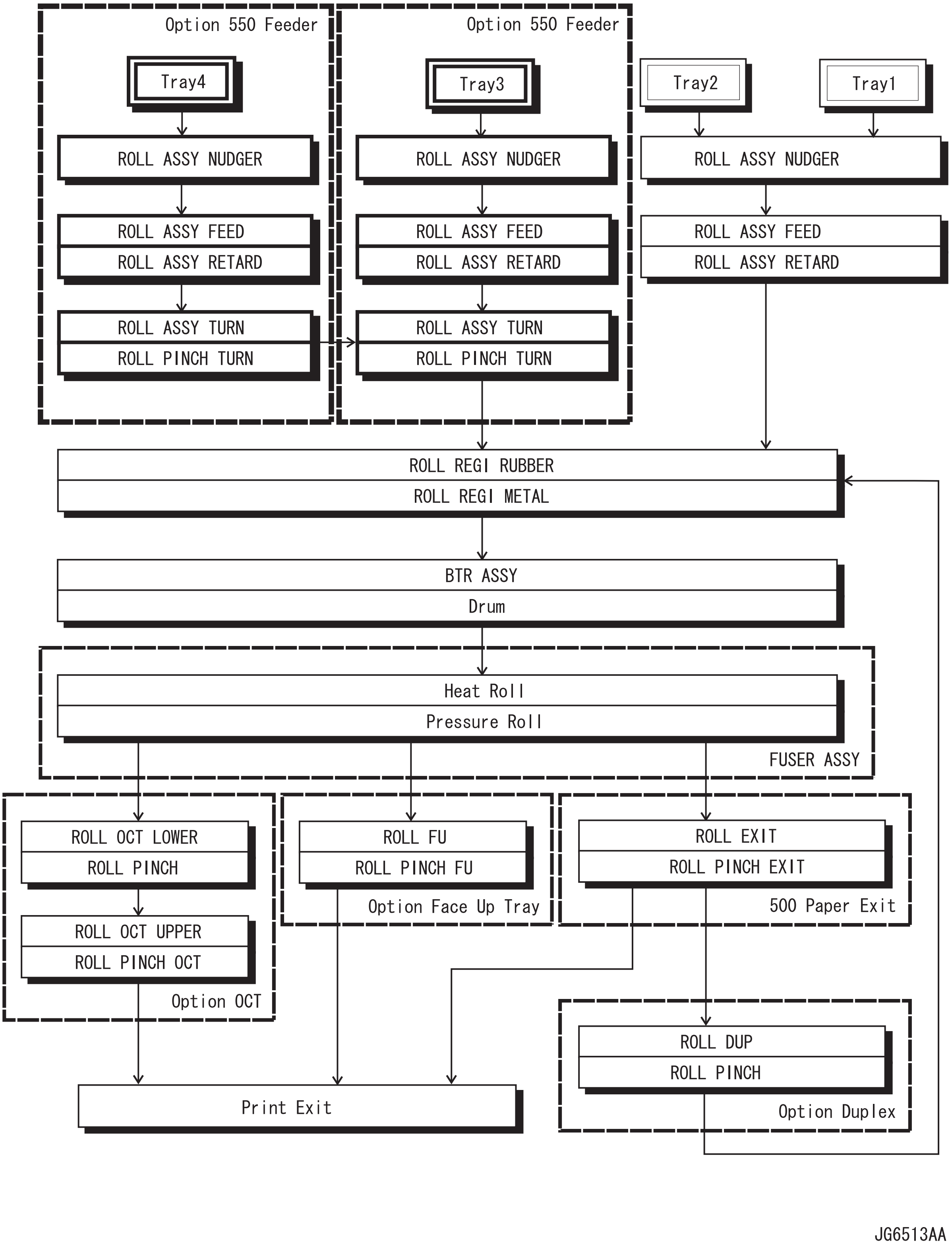

CLUTCH PR-REGI
CLUTCH ASSY PH
GEAR OPT FDR4
GEAR OPT FDR6
MOTOR FEEDER
GEAR OPT FDR5
GEAR OPT FDR2
GEAR OPT FDR3

J26512AA

6.2 Paper Transport

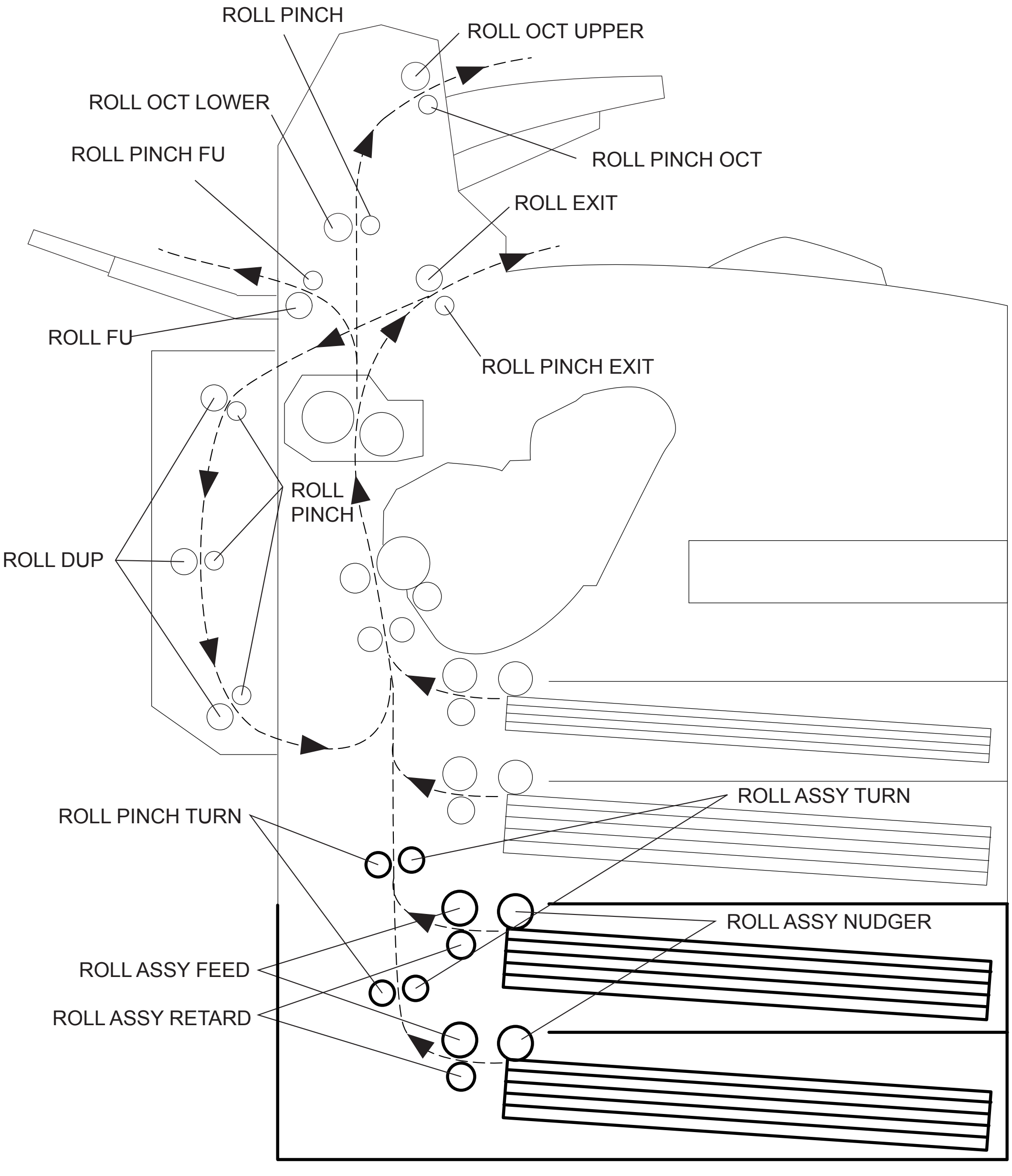
6.2.1 Paper Transport Path

When the Option 550 Feeder has been added, the paper is transported in the sequence given below.


Option 550 Feeder
Tray4
ROLL ASSY NUDGER
ROLL ASSY FEED
ROLL ASSY RETARD
ROLL ASSY TURN
ROLL PINCH TURN
Option 550 Feeder
Tray3
ROLL ASSY NUDGER
ROLL ASSY FEED
ROLL ASSY RETARD
ROLL ASSY TURN
ROLL PINCH TURN
Tray2
Tray1
ROLL ASSY NUDGER
ROLL ASSY FEED
ROLL ASSY RETARD
ROLL REGI RUBBER
ROLL REGI METAL
BTR ASSY
Drum
Heat Roll
Pressure Roll
FUSER ASSY
ROLL OCT LOWER
ROLL PINCH
ROLL OCT UPPER
ROLL PINCH OCT
Option OCT
ROLL FU
ROLL PINCH FU
Option Face Up Tray
ROLL EXIT
ROLL PINCH EXIT
500 Paper Exit
ROLL DUP
ROLL PINCH
Option Duplex
Print Exit
JG6513AA

6.2.2 Layout of Paper Transport Path

Main components regarding the transport of the paper when the Option 550 Feeder is installed are given below.


ROLL PINCH
ROLL OCT UPPER
ROLL OCT LOWER
ROLL PINCH FU
ROLL PINCH OCT
ROLL EXIT
ROLL FU
ROLL PINCH EXIT
ROLL PINCH
ROLL DUP
ROLL ASSY TURN
ROLL PINCH TURN
ROLL ASSY NUDGER
ROLL ASSY FEED
ROLL ASSY RETARD
JG6514AA

6.3 Actions of Main Functional Components

The Option 550 Feeder is available as an optional feeder for JIGEN laser printer. The Paper Cassette installed in the optical feeder is identical in function with the standard Paper Cassette used by the base engine, and so the description of the Paper Cassette is omitted here.

OPT ASSY SIZE

A switch for setting the size of paper supplied from Paper Cassette is mounted. A signal indicating the set size is transmitted as a voltage to the MCU side of HVPS/MCU.

ACTUATOR NO PAPER

If paper runs out in the Paper Cassette, the ACTUATOR NO PAPER drops and the flag of the ACTUATOR NO PAPER that shielded the detection portion of the SENSOR NO PAPEER moves off the detection portion. Thus, the light is transmitted.

SENSOR NO PAPER

The presence or absence of paper in the Paper Cassette is detected by the position of the ACTUATOR NO PAPER. This is converted into an electrical signal. If the detection portion is shielded (i.e., there is paper), /NO PAPER FEED 550 SNR ON signal is turned OFF.

ACTUATOR LOW PAPER

When paper is low in the Paper Cassette, the arm of the ACTUATOR LOW PAPER is pushed up by the PLATE ASSY BTM. The flag of the ACTUATOR LOW PAPER that shielded the detection portion of the SENSOR LOW PAPER moves off the detection portion. Thus, the light is transmitted.

SENSOR LOW PAPER

The state that paper is low in the Paper Cassette is detected by the position of the ACTUATOR LOW PAPER. This is converted into an electrical signal. If the detection portion is shielded (i.e., paper is high), /LOW PAPER FEED 550 SNR ON signal is turned OFF.

550 FEEDER OPTION

This is a mechanism for supplying paper from the Paper Cassette into the printer. The driving force from the MOTOR FEEDER is transmitted via the CLUTCH ASSY PH to the ROLL ASSY FEED and ROLL ASSY NUDGER. Thus, the paper is transported.

When the ROLL ASSY NUDGER picks up some sheets of paper and the paper gets low, the position of the ROLL ASSY NUDGER drops accordingly. The lowered ROLL ASSY NUDGER pushes down the lock lever of the PLATE ASSY BTM, releasing it. The PLATE ASSY BTM is pushed up by a spring, and thus the paper is raised. The raised paper then raises the SUPPORT NUDGER. The SUPPORT NUDGER disengages from the lock lever of the PLATE ASSY BTM. The PLATE ASSY BTM stops moving upward.

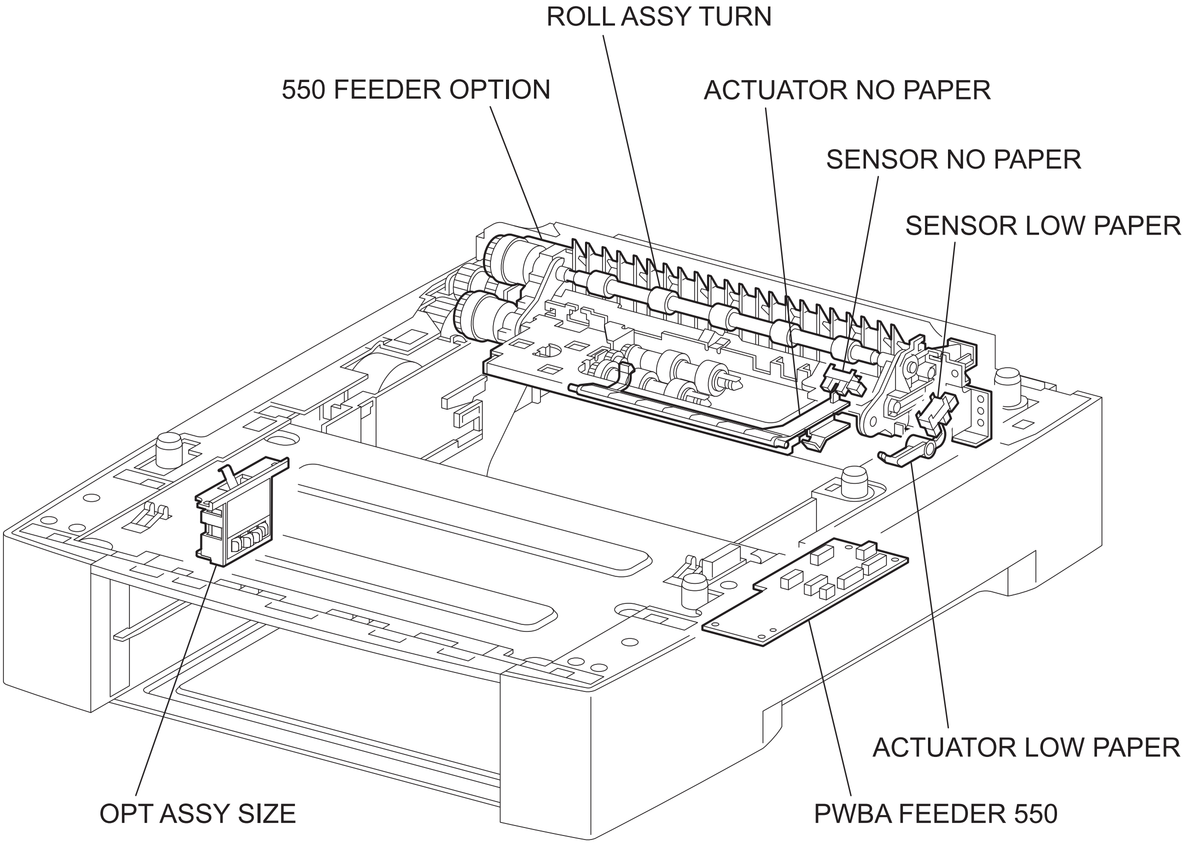
ROLL ASSY TURN

This roll conveys the paper into the printer after the paper is transported by the ROLL ASSY FEED and ROLL ASSY NUDGER. The driving power from the MOTOR FEEDER is transmitted to the ROLL ASSY via the CLUTCH PR-REGI. This conveys the paper into the printer together with ROLL PINCH TURN.

PWBA FEEDER 550

A CPU is installed in the PWBA FEEDER 550. This CPU receives instructions from HVPS/MCU and from sensors and switches, and controls feeding operation in the Option 550 Feeder.

A flash ROM is used with the CPU installed in the PWBA FEEDER, so that the firmware can be rewritten through communications.


ROLL ASSY TURN
550 FEEDER OPTION
ACTUATOR NO PAPER
SENSOR NO PAPER
SENSOR LOW PAPER
ACTUATOR LOW PAPER
OPT ASSY SIZE
PWBA FEEDER 550

JG6515AA

7. Wiring Diagrams and Signal Information

7.1 Connection Wiring Diagram

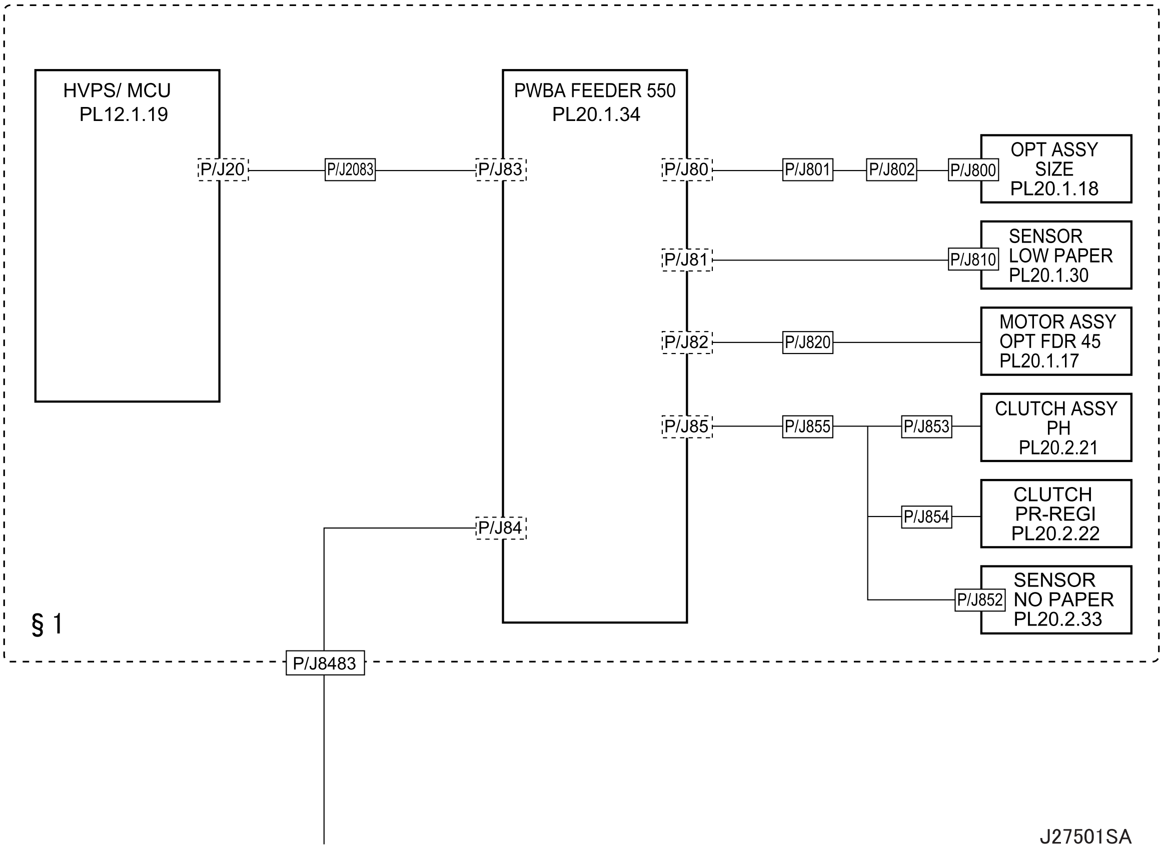
7.1.1 Symbols in the General Connection Wiring Diagram

The symbols in the general connection wiring diagram are described below.

Symbol	Description
━━━━━	Represents an interconnection between parts using wiring harness or wire.
▲ ━ ━ ▼	Represents an interconnection which differs according to the specifications.
▨	Represents an interconnection between parts using a conductive member such as a plate spring.
	Represents a connection between parts by tightening of a screw.
⏚	Indicates a frame ground.
P/J X X	Represents a connector. The connector No. is indicated inside the box.
JP X X	Represents a connection terminal with a plate spring on the printed circuit board. The connector (terminal) No. is indicated inside the box.
P X X	Represents a connector directly connected to the printed circuit board. The connector No. is indicated inside the box.
POWER SUPPLY A PL X.Y.Z	The box containing a part name represents a part. "PL X.Y.Z" indicates the item "Z" of the plate (PL) "X.Y" described in Chapter 5 "Parts List."
Main Motor	Represents a functional part within a part, and indicates the name of the functional part.
§ 1	Represents a section in "2. Interconnection Wiring Diagram of Parts," and indicates its section No.
	Represents a screw for fixing wiring harness and a conductive member such as a plate spring.

Symbol	Description
	Represents a conductive member such as a plate spring.

7.1.2 General Wiring Diagram

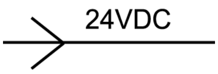
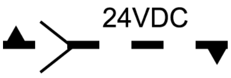
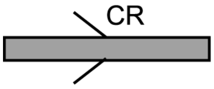
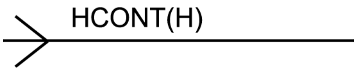
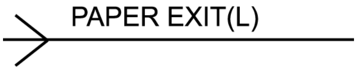
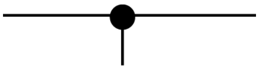
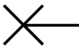
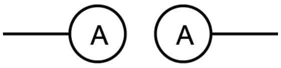
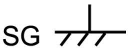
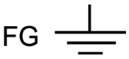

HVPS/ MCU
PL12.1.19
P/J20
P/J2083
P/J83
PWBA FEEDER 550
PL20.1.34
P/J80
P/J801
P/J802
P/J800
OPT ASSY
SIZE
PL20.1.18
P/J81
P/J810
SENSOR
LOW PAPER
PL20.1.30
P/J82
P/J820
MOTOR ASSY
OPT FDR 45
PL20.1.17
P/J85
P/J855
P/J853
CLUTCH ASSY
PH
PL20.2.21
P/J854
CLUTCH
PR-REGI
PL20.2.22
P/J852
SENSOR
NO PAPER
PL20.2.33
P/J84
§ 1
P/J8483
J27501SA

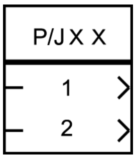
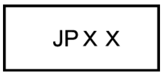
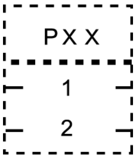
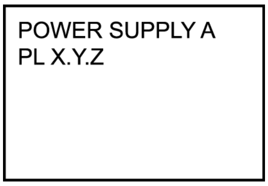
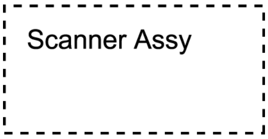
NOTE **Option 550 Paper Feeder are connectable to two sets.**

7.2 Interconnection Wiring Diagram of Parts

7.2.1 Instructions for the Use of the Interconnection Wiring Diagram of Parts

The symbols in the interconnection wiring diagram of parts are described below.
Note that the description of general symbols is omitted.

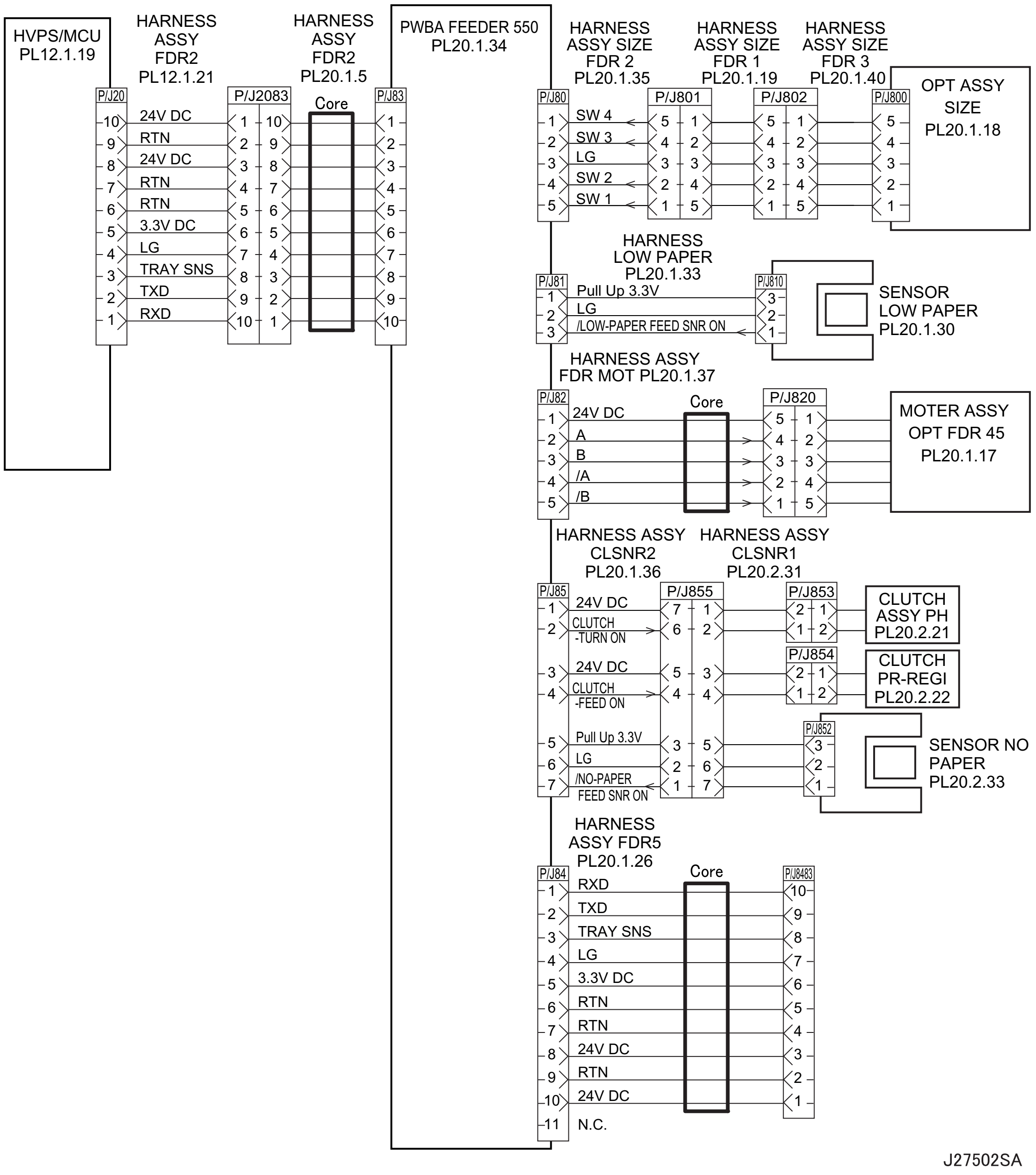
Symbol	Description
	Represents an interconnection between parts using wiring harness or wire, and indicates its signal name/contents. The arrow ">" or "<" on the line represents the direction of the signal.
	Represents an interconnection between parts using wiring harness or wire, which differs according to the specifications, and indicates its signal name/contents. The arrow ">" or "<" on the line represents the direction of the signal.
	Represents a interconnection between parts using a conductive member such as a plate spring, and indicates its signal name/ contents. The arrow ">" or "<" on the line represents the direction of the signal.
	Represents a function and a logical value (High (H) or Low (L)) of a signal when the function is activated. The voltage indicates a value when the signal is High. The arrow indicates the direction of the signal.
	Represents a function and a logical value (High (H) or Low (L)) of a signal when the function is in a detectable state. The voltage indicates a value when the signal is High. The arrow indicates the direction of the signal.
	Represents a connection between lead wires.
	Represents a connection between parts by tightening of a screw.
	Represents a connection between "A" and "A".
24VDC	The DC voltage indicates an approximate value measured when the negative side is connected to a signal ground (SG).
	Indicates a signal ground (SG).
	Indicates a frame ground (FG).
RTN	Indicates a return.

Symbol	Description
	Represents a connector. The connector and PIN Nos. are shown at the upper and lower parts respectively. "P,-" indicates the plug side of the connector. "J,>" indicates the jack side of the connector.
	Represents a connection terminal with a plate spring on the printed circuit board. The connector No. is indicated inside the box.
	Represents a connector directly connected to the printed circuit board. The connector No. is indicated inside the box.
	Represents a part. "PL X.Y.Z" indicates the item "Z" of the plate (PL) "X.Y" described in Chapter 5 "Parts List."
	Represents a functional part within a part, and indicates the name of the functional part.
◆	Indicates a reference item associated with the section.

7.2.2 Configuration of the Interconnection Wiring Diagram of Parts

§ 1 Option 550 Paper Feeder
- Connections of HVPS/MCU with PWBA FEEDER550
- Connections of PWBA FEEDER550 with OPT ASSY SIZE
- Connections of PWBA FEEDER550 with SENSOR LOW PAPER
- Connections of PWBA FEEDER550 with MOTOR ASSY OPT FDR 45
- Connections of PWBA FEEDER550 with CLUTCH ASSY PH
- Connections of PWBA FEEDER550 with CLUTCH PR-REGI
- Connections of PWBA FEEDER550 with SENSOR NO-PAPER

§ 1 Option 550 Paper Feeder


HVPS/MCU
PL12.1.19
HARNESS ASSY FDR2 PL12.1.21
HARNESS ASSY FDR2 PL20.1.5
PWBA FEEDER 550 PL20.1.34
P/J20
P/J2083
Core
P/J83
24V DC
RTN
24V DC
RTN
RTN
3.3V DC
LG
TRAY SNS
TXD
RXD
HARNESS ASSY SIZE FDR 2 PL20.1.35
HARNESS ASSY SIZE FDR 1 PL20.1.19
HARNESS ASSY SIZE FDR 3 PL20.1.40
OPT ASSY SIZE PL20.1.18
P/J80
P/J801
P/J802
P/J800
SW 4
SW 3
LG
SW 2
SW 1
HARNESS LOW PAPER PL20.1.33
P/J81
P/J810
Pull Up 3.3V
LG
/LOW-PAPER FEED SNR ON
SENSOR LOW PAPER PL20.1.30
HARNESS ASSY FDR MOT PL20.1.37
P/J82
P/J820
24V DC
A
B
/A
/B
MOTER ASSY OPT FDR 45 PL20.1.17
HARNESS ASSY CLSNR2 PL20.1.36
HARNESS ASSY CLSNR1 PL20.2.31
P/J85
P/J855
P/J853
P/J854
P/J852
24V DC
CLUTCH -TURN ON
24V DC
CLUTCH -FEED ON
Pull Up 3.3V
LG
/NO-PAPER FEED SNR ON
CLUTCH ASSY PH PL20.2.21
CLUTCH PR-REGI PL20.2.22
SENSOR NO PAPER PL20.2.33
HARNESS ASSY FDR5 PL20.1.26
P/J84
P/J8483
RXD
TXD
TRAY SNS
LG
3.3V DC
RTN
RTN
24V DC
RTN
24V DC
N.C.
J27502SA

Signal line name	Description
TRAY SNS	Signal detecting an Option 550 Paper Feeder. ID is recognized by the number of falling edges.
/LOW-PAPER FEED SNR ON	Signal from SENSOR LOW PAPER. This signal goes Low when light is received.
A and B	Excitation signal for MOTOR ASSY OPT FDR 45. Phases A and B.
/A and /B	Excitation signal for MOTOR ASSY OPT FDR 45. Phases /A and /B.
CLUTCH-TURN ON	Control signal for CLUTCH ASSY PH. Low: ON / High: OFF
CLUTCH-FEED ON	Control signal for CLUTCH PR-REGI. Low: ON / High: OFF
/NO-PAPER FEED SNR ON	Signal from SENSOR NO PAPER. This signal goes Low when light is received.

8. Machine Structure

8.1 Fundamental Structure

Option 550 Paper Feeder(s) are used attaching in the bottom of the main part of a printer. A maximum of two pieces can be attached.

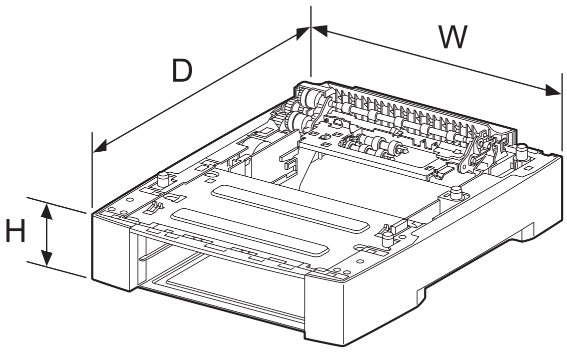
The fundamental structure of the machine consists of "Option 550 Paper Feeder", and "paper cassette(Option 550 Paper Cassette)".

8.2 Mechanical Characteristics

8.2.1 Dimensions/Mass of Option 550 Paper Feeder

The dimensions are specified under the same posture as installed in the machine. Partial protrusions are not included.

Width (W):	421.8 mm
Depth (D):	451.6 mm (510.2 mm when extended)
Height (H):	143.0 mm
Mass:	6.3 kg



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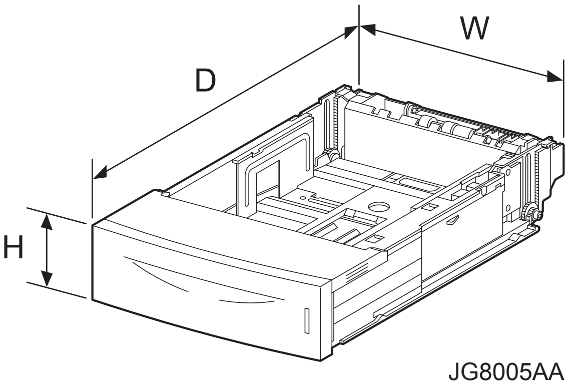
8.2.2 Dimensions/Mass of Option 550 Paper Cassette

The dimensions are specified under the same posture as installed in the machine. Partial protrusions are not included.

Width (W):	283.7 mm
Depth (D):	394.6 mm (453.2 mm when extended)
Height (H):	85.6 mm
Mass:	2.12 kg



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8.2.3 Paper

8.2.3.1 Feedable Paper Size

The minimum and maximum sizes of paper that can be fed by the machine are as follows:

Width:	98.4 mm (min) to 215.9 mm (max)

Length: 148.0 mm (min) to 355.6 mm (max)

8.2.3.2 Paper Size

The following table shows the paper sizes that can be set in paper feed section.
Every kind of paper is set in the SEF (Short Edge Feed) direction.

Type	Paper size (mm × mm)
LEGAL14"	215.9 × 355.6
LEGAL13"	215.9 × 330.2
LETTER	215.9 × 279.4
EXECTIVE	184.2 × 266.7
STATEMENT	139.7 × 215.9
A4	210.0 × 297.0
B5 (JIS)	182.0 × 257.0
B5 (ISO)	176.0 × 250.0
A5	148.0 × 210.0
A6	105.0 × 148.5
Commercial #10	104.8 × 241.3
Envelope C5	162.0 × 229.0
Envelope DL	110.0 × 220.0
Monarch	98.4 × 190.5
Official Postal Card	100.0 × 148.0

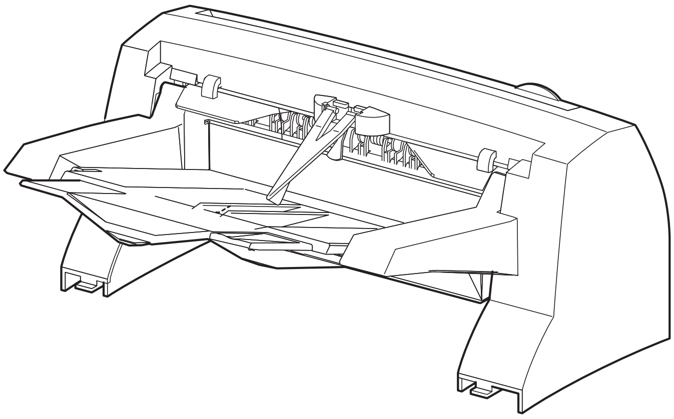
8.2.3.3 Paper Feeding Capacity

Plain Paper: Less than 550 sheets of standard paper or less than 59.4 mm of paper level

8.2.3.4 Paper Weight

64 to 216 g/m^2

Oki B7x0
Laser Printer
Option OCT Technical Manual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Version 1.0

Marks giving caution

Maintenance operations requiring special cautions or additional information to descriptions of this manual are presented as "Warning", "Caution", or "Note", according to their nature.

WARNING	***If instructions are not observed, death or serious injury may be caused.***
CAUTION	**If instructions are not observed, injuries of workers or physical damages to assets (including this laser printer) may result.**
NOTE	**Particularly important essentials for procedures, steps, rules, and others.**

Safety

To prevent possible accidents during maintenance operation, you should observe strictly the "Warning" and "Caution" information in this manual.

Dangerous operations and operations out of range of this manual should be absolutely avoided.

Generally various processes not covered by this manual may be required in actual operation, which should be performed carefully always giving attention to safety.

Power source

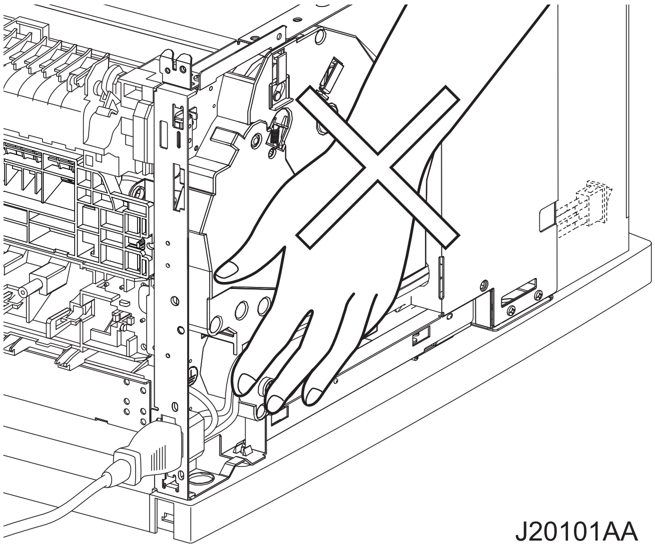
Keep the power supply off of the printer connected with this unit during maintenance operation to prevent electric shock, burns and other damages. Keep the power plug disconnected during the maintenance operation.

If the power supply should be kept connected for measurement of voltage or other similar reasons, sufficient care should be given to prevent electric shock, by following the procedures of this manual.

WARNING ***While the printer connected with this unit is ON, never touch live parts if not required absolutely.***

WARNING ***Power is supplied to the power switch / inlet (LVPS ASSY) even while the printer connected with this unit is off. Never touch its live components.***

WARNING ***Do not touch live parts of the printer connected with this unit unless otherwise specified.***



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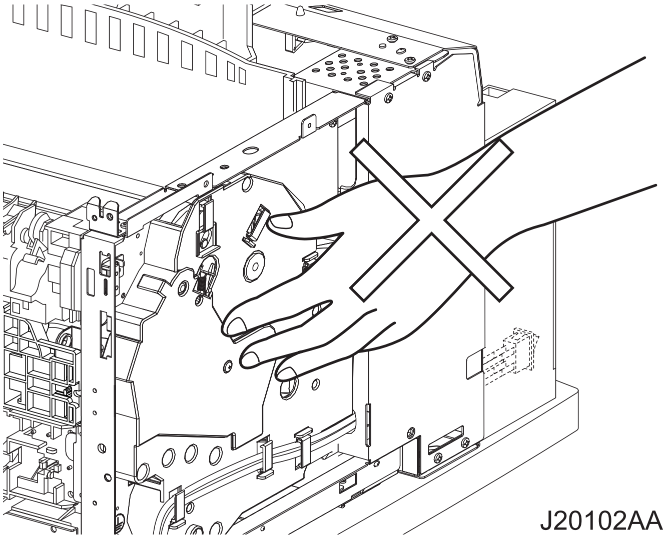
Driving units

When servicing gears or other driving units of this unit or the printer connected with this unit, be sure to turn them OFF and plug off. Drive them manually when required.

WARNING

Never touch the gears or other driving units while the printer is running.



Installation

Unpacking

CAUTION **The printer must be carried horizontally with two or more persons.**

CAUTION **Extreme care must be taken to avoid personal injuries.**

Unpacking Option OCT

Unpack the carton, and confirm that the number of the Option OCT and the attachments, and their appearances have no problem.

1) Option OCT main unit

Installation Procedures

Installing laser printer

For details, refer to the Instruction Manual supplied with the main unit.

CAUTION **When holding up the laser printer, be sure to grasp the handles with both hands. Grasping a part other than the handles result in fall or damage of the laser printer.**

CAUTION When lifting the laser printer, bend your knees thoroughly to prevent lower back strain.

CAUTION The protection sheets and the fixing materials, which are removed before the installation, are re-used when the laser printer is moved to another place. Be sure to keep them.

1) Unpack the laser printer, and place it in an installation location after removing cushioning materials.
2) Confirm the attachments.
3) Peel off fixing tapes applied to the laser printer.
4) Unpack the EP CARTRIDGE, then be sure to shake it seven to eight times holding both sides.

NOTE **When removing the toner seal, draw it out straight and horizontally. After the removal, be careful not to shake or give a shock to the EP CARTRIDGE.**

5) Open the COVER OPEN, and install the EP CARTRIDGE.
6) Close the COVER OPEN.
7) Draw the paper tray, and press down the PLATE ASSY BTM to lock.
8) Place papers into the paper tray.

NOTE **When placing papers into the paper tray, be careful for the followings:**
- Align four corners of papers to place.
- Adjust the paper guide to the paper size.
- Do not place papers over the capacity or over the upper-limit line of the paper tray.

9) Push the paper tray into the laser printer to install.
10) Connect the power cord.
11) Turn on the power switch of the laser printer.

12) Try some test printings with each paper-feed trays to confirm that there is no problem.

Installing Option OCT

For details, refer to the Instruction Manual supplied with the main unit or Chapter 3 RRP 23.1 Option OCT.

CAUTION **Before the installation, turn off the power and plug off the power cord.**

NOTE **The Option OCT can be installed only when the 500 Paper Exit has been installed on the laser printer.**

1) Unpack the Option OCT, remove cushioning materials, and confirm the attachments.
2) Fit the hooks on the lower part of the Option OCT with the holes on the rear of the laser printer to install.
3) Tighten the screws (two) on the lower part of the Option OCT to fix securely.
4) Connect the power cord.
5) Turn on the power switch of the laser printer.
6) Try test printings of some sets of papers confirm that there is no problem.

Dismantlement

Dismantling laser printer and option units

For details, refer to the Instruction Manual or Chapter 3 Removal and Replacement Procedures.
Perform the dismantlement in the reverse procedures of the installation.

CAUTION

When holding up the laser printer, be sure to grasp the handles with both hands. Grasping a part other than the handles may result in fall or damage of the printer.

CAUTION

When lifting the printer, bed your knees thoroughly to prevent lower back strain.

NOTE

Be sure to remove the EP CARTRIDGE from the laser printer and put it into a plastic bag to dismantle.

NOTE

Be sure to re-use the protection sheets and fixing materials, which are removed at the installation.

NOTE

Be sure to use the cushioning materials properly.

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    - 1.1.1 Troubleshooting Flow Chart 1
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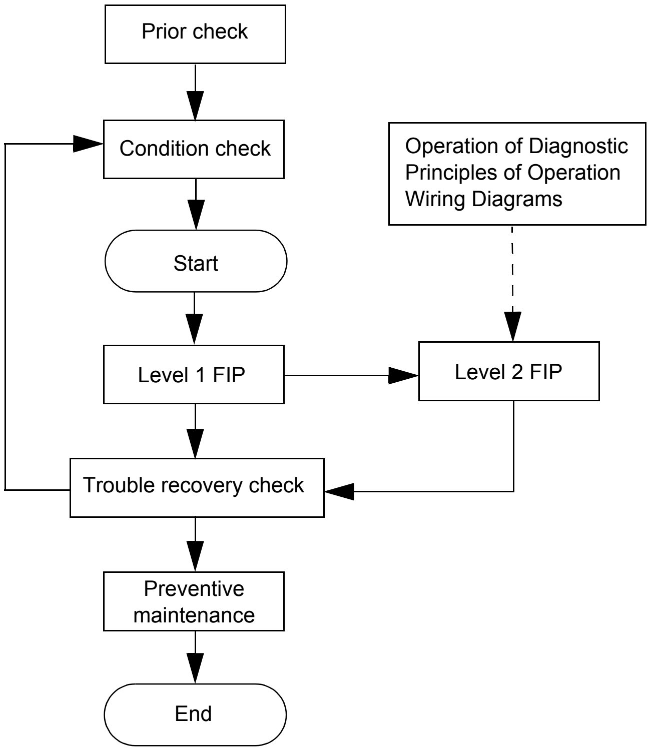
1. Troubleshooting

1.1 Progressing with the Troubleshooting

After making sure of actual condition of a trouble, proceed with the troubleshooting process efficiently making use of the Fault Isolation Procedure (FIP), Operation of Dignostic (Chapter 2), Wiring Diagrams (Chapter 7), and Principles of Operatin (Chapter 6).

1.1.1 Troubleshooting Flow Chart

Flow of the troubleshooting as follows:


Prior check
Condition check
Operation of Diagnostic
Principles of Operation
Wiring Diagrams
Start
Level 1 FIP
Level 2 FIP
Trouble recovery check
Preventive maintenance
End

1.1.2 Preparatory Requirements

Be sure to check the following items before starting the troubleshooting procedures:

1) Voltage of the power supply is within the specifications (measure the voltage at the electric outlet).

2) Power cord is free from breakage, short-circuit, disconnected wire, or incorrect connection in the power cord.

3) The laser printer is properly grounded.

4) The laser printer is not installed at a place subjected to too high temperature, too high humidity, too low temperature, too low humidity or rapid change of temperature.

5) The laser printer is not installed close to water service, humidifier, heat generating unit, or fire, in very dusty place, or a place exposed to air flow from the air conditioning system.

6) The laser printer is not installed in a place where volatile gas or inflammable gas is generated.

7) The laser printer is not installed under direct sunbeams.

8) The laser printer is installed in a well-ventilated place.

9) The laser printer is installed on a stout and stable plane.

10) Paper used meets specifications (standard paper is recommendable).

11) The laser printer is handled properly.

12) Parts which should be periodically replaced are replaced each time when specified number of sheets have been printed.

1.1.3 Cautions for Service Operations

1) Be sure to remove the power cord except when it is specifically required.

WARNING

If the printer is kept ON, never touch the conductive parts while it is not specifically required.

The power switch and inlet of LVPS is live even while the power supply is cut off. Never touch the live parts.

2) When checking some parts with covers of the printer removed and with the interlock and safety and power switches ON, remove the connector (P/J140) on the ROS ASSY except when it is specifically required.

WARNING

When checking some parts with covers of the printer removed and with the interlock and safety and power switches ON, laser beams may be irradiated from the ROS ASSY. Since it is dangerous, be sure to remove the connector (P/J140) while it is not required.

3) When using Diag. tools or other tools of high voltage, be sure to keep them covered except when otherwise specified.

WARNING

When using Diag.Tool or other tools of high voltage, never touch parts of high voltage.

When using Diag. Tool or other tools of high voltage, be sure to follow the procedure of this manual.

4) Workers should wear a wrist band or the like to remove static electricity from their body, grounding their body while working.

1.1.4 Cautions for FIP Use

1) It is assumed in the FIP that the printer controller (ESS Controller) is functioning normally. If any trouble cannot be corrected by troubleshooting, replace the printer controller with a normal one and check for proper operation again.
   If the trouble is not still corrected, replace the major parts and then related parts in succession and confirm according to the procedure of the "Check".

2) When troubleshooting according to the FIP, normal HVPS/MCU, LVPS, FUSER ASSY, BTR ASSY and so noof the printer may be necessary for isolation of failed parts. Prepare them in advance.

3) In the initial check according to the FIP, check only items which can be simply checked.

4) In the initial check according to the FIP, check the constitutive parts of the major check parts and related parts, as well as major check parts.

5) When working with the printer, be sure to remove the power cord except when required specifically. Never touch live parts if not required, while the power cord is connected.

6) Connector condition is denoted as follows:
   [P/J12] → Connector (P/J12) is connected.
   [P12] → Plug side with the connector (P/J12) removed (except when attached directly to the board).
   [J12] → Jack side with the connector (P/J12) removed (except when attached directly to the board).

7) [P/J1-2PIN <=> P/J3-4PIN] in the FIP means measurement with the plus side of the measuring instrument connected to [2PIN] of [P/J1] and the minus side to [4PIN] of [P/J3].

8) [P/J1<=> P/J2] in the FIP means measurement for all terminals corresponding between [P/J1] and [P/J2] referring to "Wiring Diagrams".

9) In [P/J1-2PIN <=> P/J3-4PIN] in the FIP where voltage is measured, [P/J3-4PIN] on the rear minus side is always at the AG (analog ground), SG (signal ground), or RTN (return).
   Therefore, after checking of proper continuty between AGs, SGs, or RTNs respectively, the rear minus side can be connected to the PIN of AG, SG or RTN instead of [P/J3-4PIN].
   However, care should be taken not to mistake since [AG], [SG], and [RTN] are not on the same level.

10) Measure the voltage of small connectors with the special tool. Handle the tool with care, as the leading edge of the tool is pointed.

11) When measuring the voltage, set the EP CARTRIDGE, BRT ASSY and paper tray, close the COVER TOP ASSY, FUSER ASSY, and COVER REAR and power ON if not required specifically.

12) Numerical values in the FIP are only for standard. If numerical values are approximate, they should be considered permissible.

13) Parts which are always removed to check as indicated in the FIP and procedures for that purpose are not specifically referred to here. They should be handled carefully.

14) “Replacement” in the FIP indicates replacement of parts which are considered to be the source of trouble to be checked after replacing those parts, assemblies containing them (HIGH ASSY).

15) The FIP describes the first tray on the lower part of the devie as “Tray 1,” and the second tray as “Tray 2”, and the first tray of Option 550 Paper Feeder as “Tray 3”, and the second tray as “Tray 4”.

16) In the FIP, existence and non-existence of Diag tools (maintenance tools) are distinguished in some cases. Correct troubles according to the instructions in the FIP.

17) In the FIP, procedures are differentiated depending on specifications. Correct troubles according to the instructions in the FIP.

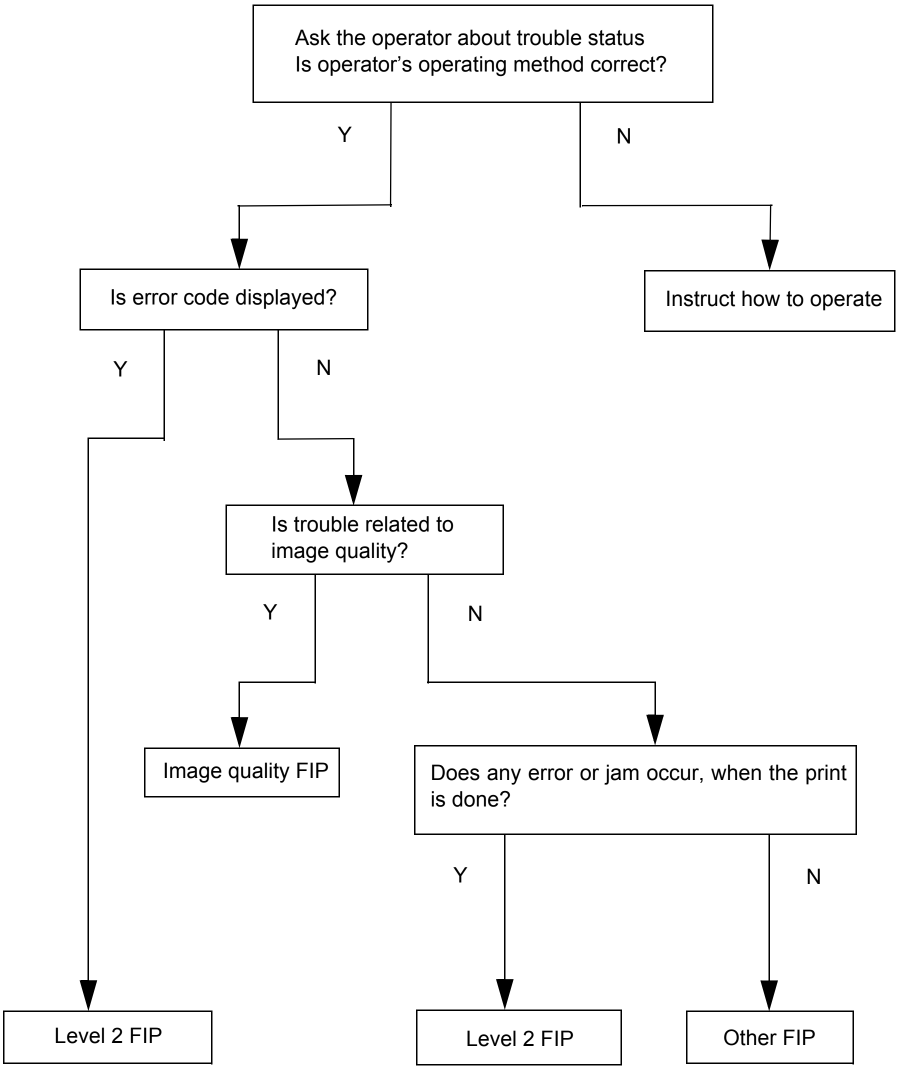
18) For the printer, some troubleshooting procedure may follow the manual of the printer, of which you should take note.
Keep the manual for the printer when required.

1.2 Level 1 FIP

1.2.1 Level 1 FIP

The level 1 FIP is the first step for trouble diagnosis. The level 1 FIP isolates the presence of various troubles including error codes, and the level 2 FIP provides a guide for proceeding of the troubleshooting.

1.2.2 Flow of Level 1 FIP


Ask the operator about trouble status
Is operator’s operating method correct?
Y
N
Is error code displayed?
Instruct how to operate
Y
N
Is trouble related to image quality?
Y
N
Image quality FIP
Does any error or jam occur, when the print is done?
Y
N
Level 2 FIP
Level 2 FIP
Other FIP

1.2.3 Error/Status Code List

Status Code	Error Contents	Error Description	FIP to be referred
STATUS 3-1	JS0	STATUS 3-1 to 3-5 indicates JAM by combination of Table 1-1.	
STATUS 3-2	JS1		
STATUS 3-3	JS2		
STATUS 3-4	JS3		
STATUS 3-5	JS4		
STATUS 16-5	Full Stack (OCT)	- Option OCT became Full Stack.	FIP1.42
STATUS 17-2	OCT Cover Open	- Cover of Option OCT is open.	FIP1.37
STATUS 17-5	OCT Unit Fail	- Option OCT is not installed when OCT mode is selected.	FIP1.38 FIP1.43
STATUS 21-1	Illegal Size (Duplex/OCT)	- Paper size that is not supported in Duplex or OCT mode is selected.	FIP1.31 (Separate Volume) FIP1.41

Table 1-1

JS4	JS3	JS2	JS1	JS0	Contents of Jam	Error Description	FIP to be referred
0	1	1	0	1	OCT Jam 1	Paper Jam/Exit to OCT - When the paper did not reach to OCT Sensor from Exit Sensor within the specified time.	FIP1.39
1	0	1	0	1	OCT Jam 2	Paper Jam/OCT - When the paper was not fed to OCT Sensor within the specified time. - When OCT Sensor turned ON in warming up.	FIP1.40

1.3 Level 2 FIP

1.3.1 Level 2 FIP

The Level 2 FIP is the trouble diagnostic procedure to be sorted based on the symptoms of various troubles. In the troubleshooting, executing the steps given in the FIP or checking procedure allows you to find out a cause of trouble in a short time.

1.4 Error Code FIP

1.4.1 Level 1 FIP

FIP1.37 Option OCT Cover Error

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) LVPS (PL12.1.5) PWBA OCT (PL23.1.22) COVER REAR (PL23.1.4) COVER OCT (PL23.1.1) S/W REAR COVER (PL23.1.18) HARNESS ASSY REAR COVER (PL23.1.29)		
1	Checking COVER REAR Is the rib on COVER REAR to push down S/W REAR COVER damaged?	Replace Cover REAR. (RRP23.2)	With tool Go to step 2. Without tool Go to FIP2.40 S/W REAR COVER.
2	Checking S/W REAR COVER for function Remove EP CARTRIDGE. Does the number of Sensor/Switch Check increase by one, every time COVER REAR is opened and closed? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.40 S/W REAR COVER.

FIP1.38 Option OCT Error

Step	Check	Yes	No
	Possible causative parts: HARNESS ASSY OCT1 (PL12.1.26) HVPS/MCU (PL12.1.19) PWBA OCT (PL23.1.22) HARNESS ASSY OCT2 (PL23.1.25)		
1	Checking Option OCT installation Remove Option OCT, reinstall and turn the power ON. Does Error still occur?	Go to FIP2.36 PWBA OCT.	End of work

FIP1.39 Paper Jam/Exit to OCT

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) SENSOR OCT (PL23.1.30) ACTUATOR OCT (PL23.1.31) ROLL OCT LOWER (PL23.1.16) ROLL OCT UPPER (PL23.1.36) ROLL PINCH (PL23.1.34) MOTOR ASSY OCT (PL23.1.6)		
1	Does Error occur, when the power is turned ON?	Go to step 2.	Go to step 4.
2	Checking the paper at ACTUATOR OCT Open COVER REAR. Does the paper remain at ACTUATOR OCT?	Remove the paper, and then go to step 3.	Go to FIP2.41 SENSOR OCT.
3	Does Error occur, when the power is turned ON?	Go to FIP2.41 SENSOR OCT.	Go to step 4.
4	Carrying out a test printing Remove Option OCT, and then reinstall it. Does Error still occur, when Test Printing is done in OCT mode?	Go to step 5.	End of work
5	Checking transmission of driving force Do ROLL OCT LOWER, ROLL OCT UPPER and every GEAR rotate smoothly? Remove COVER OCT (RRP23.4), and turn ROLL OCT LOWER, ROLL OCT UPPER and every GEAR with a finger to check.	Go to step 6.	Replace the parts disturbing rotation.
6	Checking paper transfer at ROLL OCT LOWER and ROLL PINCH Insert paper between ROLL OCT LOWER and ROLL PINCH from lower portion of Option OCT. Is the paper transferred smoothly, when turning GEAR 19/37 (PL23.1.8) counterclockwise with a finger?	Go to step 7.	Replace the roll disturbing transfer.
7	Checking MOTOR ASSY OCT Does MOTOR ASSY OCT rotate normally? Checks by Chapter 2 Diagnostic [OCT Motor Test].	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.37 MOTOR ASSY OCT.

FIP1.40 Paper Jam/OCT

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) SENSOR OCT (PL23.1.30) ACTUATOR OCT (PL23.1.31) ROLL OCT LOWER (PL23.1.16) ROLL OCT UPPER (PL23.1.36) ROLL PINCH (PL23.1.34) MOTOR ASSY OCT (PL23.1.6)		
1	Does Error occur, when the power is turned ON?	Go to step 2.	Go to step 5.
2	Checking the paper at ACTUATOR OCT Open COVER REAR. Does the paper remain at ACTUATOR OCT?	Remove the paper, and then go to step 3.	Go to FIP2.41 SENSOR OCT.
3	Checking ACTUATOR OCT for operation Does ACTUATOR OCT move smoothly, when you move it?	Go to step 4.	Replace ACTUATOR OCT.
4	Does Error occur, when the power is turned ON?	Go to FIP2.41 SENSOR OCT.	Go to step 5.
5	Carrying out a test printing Remove Option OCT, and then reinstall it. Does Error still occur, when Test Printing is done in OCT mode?	Go to step 6.	End of work
6	Checking transmission of driving force Do ROLL OCT LOWER, ROLL OCT UPPER and every GEAR rotate smoothly? Remove COVER OCT (RRP23.4), and turn ROLL OCT LOWER, ROLL OCT UPPER and every GEAR with a finger to check.	Go to step 7.	Replace the parts disturbing rotation.
7	Checking paper transfer at ROLL OCT LOWER and ROLL PINCH Insert paper between ROLL OCT LOWER and ROLL PINCH from lower portion of Option OCT. Is the paper transferred smoothly, when turning GEAR 19/37 (PL23.1.8) counterclockwise with a finger?	Go to step 8.	Replace the roll disturbing transfer.
8	Checking MOTOR ASSY OCT Does MOTOR ASSY OCT rotate normally? Checks by Chapter 2 Diagnostic [OCT Motor Test].	Replace HVPS/MCU. (RRP12.10)	Go to FIP2.37 MOTOR ASSY OCT.

FIP1.41 Paper Size Error/OCT

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) GUIDE TRAY LEFT (PL7.1.7) PWBA FEEDER 550 (PL20.1.34)		
1	Checking the paper size setup Does the size of paper in use match the size set by GUIDE ASSY END?	Go to step 2.	Change the paper size setting.
2	Checking NVRAM data Does NV01 configuration 2 meet specifications?	Go to step 3.	Modify the memory data.
3	Checking the paper tray (1) Is the paper supplied from Tray 1, when Error occurred?	Replace HVPS/MCU. (RRP12.10)	Go to step 4.
4	Checking the paper tray (2) Is the paper supplied from Tray 2, when Error occurred?	Replace HVPS/MCU. (RRP12.10)	Go to step 5.
5	Checking the paper tray (3) Is the paper supplied from Tray 3, when Error occurred?	Go to FIP2.20.21 PWBA FEEDER 550.	Go to step 6.
6	Checking the paper tray (4) Is the paper supplied from Tray 4, when Error occurred?	Go to FIP2.20.21 PWBA FEEDER 550.	Replace HVPS/MCU. (RRP12.10)

FIP1.42 Full Stack Error/OCT

Step	Check	Yes	No
	Possible causative parts: Sensor Full Stack (0n PWBA OCT) HVPS/MCU (PL12.1.19) PWBA OCT (PL23.1.22) ACTUATOR FULL STACK (PL23.1.15)		
1	Checking ACTUATOR FULL STACK for operation Does ACTUATOR FULL STACK move smoothly, when you move ACTUATOR FULL STACK at the paper outlet?	With tool Go to step 2. Without tool Go to step 3.	Replace ACTUATOR FULL STACK.
2	Checking Sensor Full Stack for operation Remove EP CARTRIDGE. Does the number of Sensor/Switch Check increase b y one, when you push and release ACTUATOR FULL STACK at the paper outlet? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Go to step 3.	Go to FIP2.36 PWBA OCT.
3	Checking PWBA OCT Replace PWBA OCT. Does Error still occur, after installing a new PWBA OCT?	Replace HVPS/MCU. (RRP12.10)	End of work

FIP1.43 No Recognition of Option OCT

Step	Check	Yes	No
	Possible causative parts: HVPS/MCU (PL12.1.19) HARNESS ASSY OCT1 (PL12.1.26) PWBA OCT (PL23.1.22) HARNESS ASSY OCT2 (PL23.1.25)		
1	Checking Option OCT detection signal (1) Disconnect P/J70 on PWBA OCT. Is the voltage across J70-5 <=> J70-6 of HARNESS ASSY OCT2, 3.3 VDC?	Go to step 5.	Go to step 2.
2	Checking Option OCT detection signal (2) Is the voltage across P/J30-4 <=> P/J30-3 on HVPS/MCU, 3.3 VDC?	Go to step 3.	Replace HVPS/MCU. (RRP12.10)
3	Checking HARNESS ASSY OCT2 for continuity Remove HARNESS ASSY OCT2. Is J70 <=> J3070 continuous normally?	Go to step 4.	Replace HARNESS ASSY OCT2.
4	Checking HARNESS ASSY OCT1 for continuity Remove HARNESS ASSY OCT1. Is J30 <=> J3070 continuous normally?	Go to step 5.	Replace HARNESS ASSY OCT1.
5	Checking PWBA OCT Replace PWBA OCT. Does the problem still occur, after replacing PWBA OCT with a new PWBA OCT.	Replace HVPS/MCU. (RRP12.10)	End of work

1.4.2 Level 2 FIP

FIP2.36 PWBA OCT (PL23.1.22)

Step	Check	Yes	No
	Possible causative parts: PWBA OCT (PL23.1.22) HARNESS ASSY OCT1 (PL12.1.26) HARNESS ASSY OCT2 (PL23.1.25) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5)		
1	Checking HARNESS ASSY OCT2 for continuity Remove Option OCT. (RRP23.1) Disconnect P/J70 from PWBA OCT. Remove HARNESS ASSY OCT2. Is J70 <=> J3070 continuous normally?	Go to step 2.	Replace HARNESS ASSY OCT2.
2	Checking HARNESS ASSY OCT1 for continuity Remove HARNESS ASSY OCT1. Is J30 <=> J3070 continuous normally?	Go to step 3.	Replace HARNESS ASSY OCT1.
3	Checking PWBA OCT Replace PWBA OCT. (RRP23.7) Does the problem still occur after replacement?	End of work	Replace HVPS/MCU. (RRP12.10)

FIP2.37 MOTOR ASSY OCT (PL23.1.6)

Step	Check	Yes	No
	Possible causative parts: MOTOR ASSY OCT (PL23.1.6) PWBA OCT (PL23.1.22) HARNESS ASSY OCT MOT (PL23.1.46) HARNESS ASSY OCT2 (PL23.1.25) HVPS/MCU (PL12.1.19) HARNESS ASSY OCT1 (PL12.1.26)		
1	Checking HARNESS ASSY OCT MOT for continuity Remove HARNESS ASSY OCT MOT. Is J71 <=> J710 continuous normally?	With tool Go to step 2. Without tool Go to step 3.	Replace HARNESS ASSY OCT MOT.
2	Checking MOTOR ASSY OCT Using DIAG tool: Does the MOTOR ASSY OCT rotate? (Check by the rotating sound of the motor.) Checks by Chapter 2 Diagnostic [OCT Motor Test].	Go to step 4.	Go to step 3.
3	Checking MOTOR ASSY OCT Not using DIAG tool: Replace MOTOR ASSY OCT. (RRP23.13) Is the problem cleared?	End of work	.Go to step 5.
4	Is the problem cleared?	End of work	Go to FIP2.36 PWBA OCT.
5	Checking HARNESS ASSY OCT2 for continuity Disconnect P/J70 from PWBA OCT. Remove HARNESS ASSY OCT2. Is J70 <=> J3070 continuous normally?	Go to step 6.	Replace HARNESS ASSY OCT2.
6	Checking HARNESS ASSY OCT1 for continuity Remove HARNESS ASSY OCT1. Is J30 <=> J3070 continuous normally?	Go to step 7.	Replace HARNESS ASSY OCT1.
7	Checking PWBA OCT Replace PWBA OCT. (RRP23.7) Is the problem cleared?	End of work	Replace HVPS/MCU (RRP12.10)

FIP2.38 MOTOR ASSY OFFSET (PL23.1.20)

Step	Check	Yes	No
	Possible causative parts: MOTOR ASSY OFFSET (PL23.1.20) MOTOR ASSY OCT (PL23.1.6) PWBA OCT (PL23.1.22) HARNESS ASSY OCT2 (PL23.1.25) HVPS/MCU (PL12.1.19) HARNESS ASSY OCT1 (PL12.1.26)		
1	Checking MOTOR ASSY OFFSET Not using DIAG tool: Replace MOTOR ASSY OFFSET. (RRP23.8) Is the problem cleared?	End of work	Go to step 4.
	Using DIAG tool: Does the offset of CHUTE OFFSET ASSY operate normally? Checks by Chapter 2 Diagnostic [OCT Offset Test].	Go to step 2.	Go to step 3.
2	Is the problem cleared?	End of work	Go to FIP2.36 PWBA OCT.
3	Checking MOTOR ASSY OFFSET Replace MOTOR ASSY OFFSET. (RRP23.8) Is the problem cleared?	End of work	Go to step 4.
4	Checking HARNESS ASSY OCT2 for continuity Disconnect P/J70 from PWBA OCT. Remove HARNESS ASSY OCT2. Is J70 <=> J3070 continuous normally?	Go to step 5.	Replace HARNESS ASSY OCT2.
5	Checking HARNESS ASSY OCT1 for continuity Remove HARNESS ASSY OCT1. Is J30 <=> J3070 continuous normally?	Go to step 6	Replace HARNESS ASSY OCT1.
6	Checking PWBA OCT Replace PWBA OCT. (RRP23.7) Is the problem cleared?	End of work	Replace HVPS/MCU. (RRP12.10)

FIP2.39 SOLENOID ASSY GATE (PL23.1.27)

Step	Check	Yes	No
	Possible causative parts: SOLENOID ASSY GATE (PL23.1.27) PWBA OCT (PL23.1.22) HARNESS ASSY OCT2 (PL23.1.25) HVPS/MCU (PL12.1.19) HARNESS ASSY OCT1 (PL12.1.26)		
1	Checking SOLENOID ASSY GATE Not using DIAG tool: Replace SOLENOID ASSY GATE. (RRP23.9) Is the problem cleared?	End of work	Go to step 4.
	Using DIAG tool: Is the feed-switching operation of SOLENOID ASSY GATE correctly? Checks by Chapter 2 Diagnostic [Option Direction Test].	Go to step 2.	Go to step 3.
2	Is the problem cleared?	End of work	Go to FIP2.36 PWBA OCT.
3	Checking SOLENOID ASSY GATE Replace SOLENOID ASSY GATE. (RRP23.9) Is the problem cleared?	End of work	Go to step 4.
4	Checking HARNESS ASSY OCT2 for continuity Disconnect P/J70 on PWBA OCT. Remove HARNESS ASSY OCT2. Is J70 <=> J3070 continuous normally?	Go to step 5.	Replace HARNESS ASSY OCT2.
5	Checking HARNESS ASSY OCT1 for continuity Remove HARNESS ASSY OCT1. Is J30 <=> J3070 continuous normally?	Go to step 6.	Replace HARNESS ASSY OCT1.
6	Checking PWBA OCT Replace PWBA OCT. (RRP23.7) Is the problem cleared?	End of work	Replace HVPS/MCU. (RRP12.10)

FIP2.40 S/W REAR COVER (PL23.1.18)

Step	Check	Yes	No
	Possible causative parts: S/W REAR COVER (PL23.1.18) HARNESS ASSY REAR COVER (PL23.1.29) PWBA OCT (PL23.1.22) HARNESS ASSY OCT2 (PL23.1.25) HVPS/MCU (PL12.1.19) LVPS (PL12.1.5) HARNESS ASSY OCT1 (PL12.1.26)		
1	Checking S/W REAR COVER for continuity (1) Remove S/W REAR COVER. Is J740-2 <=> J740-1 continuous, when S/W REAR COVER is pushed, and cut when released?	Go to step 2.	Replace S/W REAR COVER.
2	Checking HARNESS ASSY REAR COVER for continuity Remove HARNESS ASSY REAR COVER. Is J74 <=> J740 continuous normally?	Go to step 3.	Replace S/W REAR COVER.
3	Checking HARNESS ASSY OCT2 for continuity Disconnect P/J70 from PWBA OCT. Remove HARNESS ASSY OCT2. Is J70 <=> J3070 continuous normally?	Go to step 4.	Replace HARNESS ASSY OCT2.
4	Checking HARNESS ASSY OCT1 for continuity Remove HARNESS ASSY OCT1. Is J30 <=> J3070 continuous normally?	Go to step 5.	Replace HARNESS ASSY OCT1.
5	Checking S/W REAR COVER (2) Remove EP CARTRIDGE. Is the voltage across P/J30-4 <=> P/J30-3 on HVPS/MCU, 3.3 VDC?	Go to FIP2.36 PWBA OCT.	Go to step 6.
6	Checking HVPS/MCU for continuity Disconnect P/J30 from HVPS/MCU. Is P30-4 <=> P11-16 continuous normally?	Go to FIP2.1 LVPS.	Replace HVPS/MCU. (RRP12.10)

FIP2.41 SENSOR OCT (PL23.1.30)

Step	Check	Yes	No
	Possible causative parts: SENSOR OCT (PL23.1.30) ACTUATOR OCT (PL23.1.31) HARNESS ASSY OCT SNR (PL23.1.26) PWBA OCT (PL23.1.22) HARNESS ASSY OCT2 (PL23.1.25) HVPS/MCU (PL12.1.19) HARNESS ASSY OCT1 (PL12.1.26)		
1	Checking ACTUATOR OCT for operation Remove Option OCT. (RRP23.1) Open COVER REAR. Move ACTUATOR OCT with a finger. Does ACTUATOR OCT operate smoothly? Does the flag go into the sensor detecting point when there is no paper, and out of the detecting point when the paper is set?	Go to step 2.	Replace ACTUATOR OCT.
2	Checking SENSOR OCT (1) Remove EP CARTRIDGE. Install Option OCT. (RRP23.1) Open COVER REAR. MOve ACTUATOR OCT up and down. Does the number increase one by one, every time ACTUATOR OCT operates? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to step 3.
3	Checking HARNESS ASSY OCT SNR for continuity Remove HARNESS ASSY OCT SNR. Is P/J73 <=> P/J730 continuous normally?	Go to step 4.	Replace HARNESS ASSY OCT SNR.
4	Checking HARNESS ASSY OCT2 for continuity Disconnect P/J70 from PWBA OCT. Remove HARNESS ASSY OCT2. Is J70 <=> J3070 continuous normally?	Go to step 5.	Replace HARNESS ASSY OCT2.
5	Checking HARNESS ASSY OCT1 for continuity Remove HARNESS ASSY OCT1. Is J30 <=> J3070 continuous normally?	Go to step 6.	Replace HARNESS ASSY OCT1.
6	Checking SENSOR OCT (2) Replace SENSOR OCT. (RRP23.10) Is the problem cleared?	End of work	Go to FIP2.36 PWBA OCT.

FIP2.42 Sensor Full Stack (PL23.1.22) (On PWBA OCT)

Step	Check	Yes	No
	Possible causative parts: Sensor Full Stack (Mounted on PWBA OCT) ACTUATOR FULL STACK (PL23.1.15) PWBA OCT (PL23.1.22) HARNESS ASSY OCT2 (PL23.1.25) HVPS/MCU (PL12.1.19) HARNESS ASSY OCT1 (PL12.1.26)		
1	Checking ACTUATOR FULL STACK for operation Remove Option OCT. (RRP23.1) Move ACTUATOR FULL STACK with a finger. Does ACTUATOR FULL STACK operate smoothly? Does the flag go into the sensor detecting point when there is no paper, and out of the detecting point when the paper is set?	With tool Go to step 2. Without tool Go to step 3.	Replace ACTUATOR FULL STACK.
2	Checking Sensor Full Stack mounted on PWBA OCT (1) Remove EP CARTRIDGE. Install Option OCT. (RRP23.1) Move ACTUATOR FULL STACK up and down. Does the number increase one by one, every time ACTUATOR FULL STACK operates? Checks by Chapter 2 Diagnostic [Sensor/Switch Check].	Replace HVPS/MCU. (RRP12.10)	Go to step 3.
3	Checking HARNESS ASSY OCT2 for continuity Disconnect P/J70 from PWBA OCT. Remove HARNESS ASSY OCT2. Is J70 <=> J3070 continuous normally?	Go to step 4.	Replace HARNESS ASSY OCT2.
4	Checking HARNESS ASSY OCT1 for continuity Remove HARNESS ASSY OCT1. Is J30 <=> J3070 continuous normally?	Go to step 5.	Replace HARNESS ASSY OCT1.
5	Checking Sensor Full Stack mounted on PWBA OCT (2) Replace PWBA OCT. (RRP23.7) Is the problem cleared?	End of work	Replace HVPS/MCU. (RRP12.10)

FIP2.43 Sensor Offset (PL23.1.22) (On PWBA OCT)

Step	Check	Yes	No
	Possible causative parts: Sensor Offset (Mounted on PWBA OCT) CHUTE OFFSET ASSY (PL23.1.35) PWBA OCT (PL23.1.22) HARNESS ASSY OCT2 (PL23.1.25) HVPS/MCU (PL12.1.19) HARNESS ASSY OCT1 (PL12.1.26)		
1	Checking the Actuator of CHUTE OFFSET for operation Remove Option OCT. (RRP23.1) Remove COVER OCT. (RRP23.4) Move the Actuator on CHUTE OFFSET with a finger. Does CHUTE OFFSET operate smoothly?	Go to step 2.	Replace CHUTE OFFSET ASSY.
2	Checking HARNESS ASSY OCT2 for continuity Disconnect P/J70 from PWBA OCT. Remove HARNESS ASSY OCT2. Is J70 <=> J3070 continuous normally?	Go to step 3.	Replace HARNESS ASSY OCT2.
3	Checking HARNESS ASSY OCT1 for continuity Remove HARNESS ASSY OCT1. Is J30 <=> J3070 continuous normally?	Go to step 4.	Replace HARNESS ASSY OCT1.
4	Checking Sensor Full Stack mounted on PWBA OCT (2) Replace PWBA OCT. (RRP23.7) Is the problem cleared?	End of work	Replace HVPS/MCU. (RRP12.10)

1.5 Preventive maintenance

When visiting the customer, perform the maintenance work other than the original purpose to avoid any trouble that may arise.

Procedure for preventive maintenance

1) Check how the customer is using the machine.
2) Write down the cumulative print count.

NOTE **Use the cumulative print count as a guide of replacing periodic replacement parts. Replace the periodic replacement parts as required.**

3) Print several piece of paper to check no problem.
4) Remove foreign articles on BTR ASSY, FUSER ASSY and paper transfer rolls, and clean stains with a brush and dry waste cloth.

NOTE **When stains is heavy, clean with dampened cloth, and then clean with dry cloth. Be careful not to damage the parts to be cleaned.**

5) Cleaning the fan exhaust
   Remove COVER REAR, and clean the dust on MAIN FAN with a brush.
   Remove COVER FRONT, and clean the dust on FAN SUB.

NOTE **The clogged exhaust and fan cause a temperature rise inside and failures.**

6) Print several piece of paper again to check no problem.

2. Diagnostics

2.1 Using Diagnostics

Please see the main Service Manual for description of using the printer’s built in diagnostic menu.

3. Removal and Replacement Procedures

Parts removal and replacement procedures of the Option OCT is described here.

NOTE

Parts are controlled as spare parts. When servicing for parts for which no procedures are described, observe their assembling condition before starting the service.

3.1 Before starting service work

- Turn the power OFF and remove the power cord from the electric outlet.
- Do not give forcible power to prevent damage of parts or functions.
- Since a wide variety of screws are used, be careful not to mistake their positions, to prevent crushing of the screw holes or other troubles.
- Wear a wrist band or the like as far as possible to remove static electricity of the human body.

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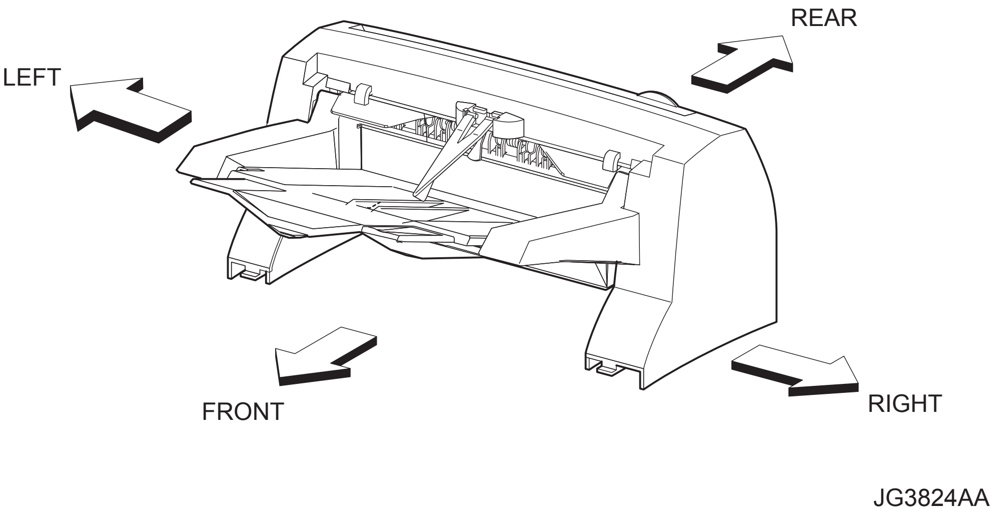
3.2 Description of procedures

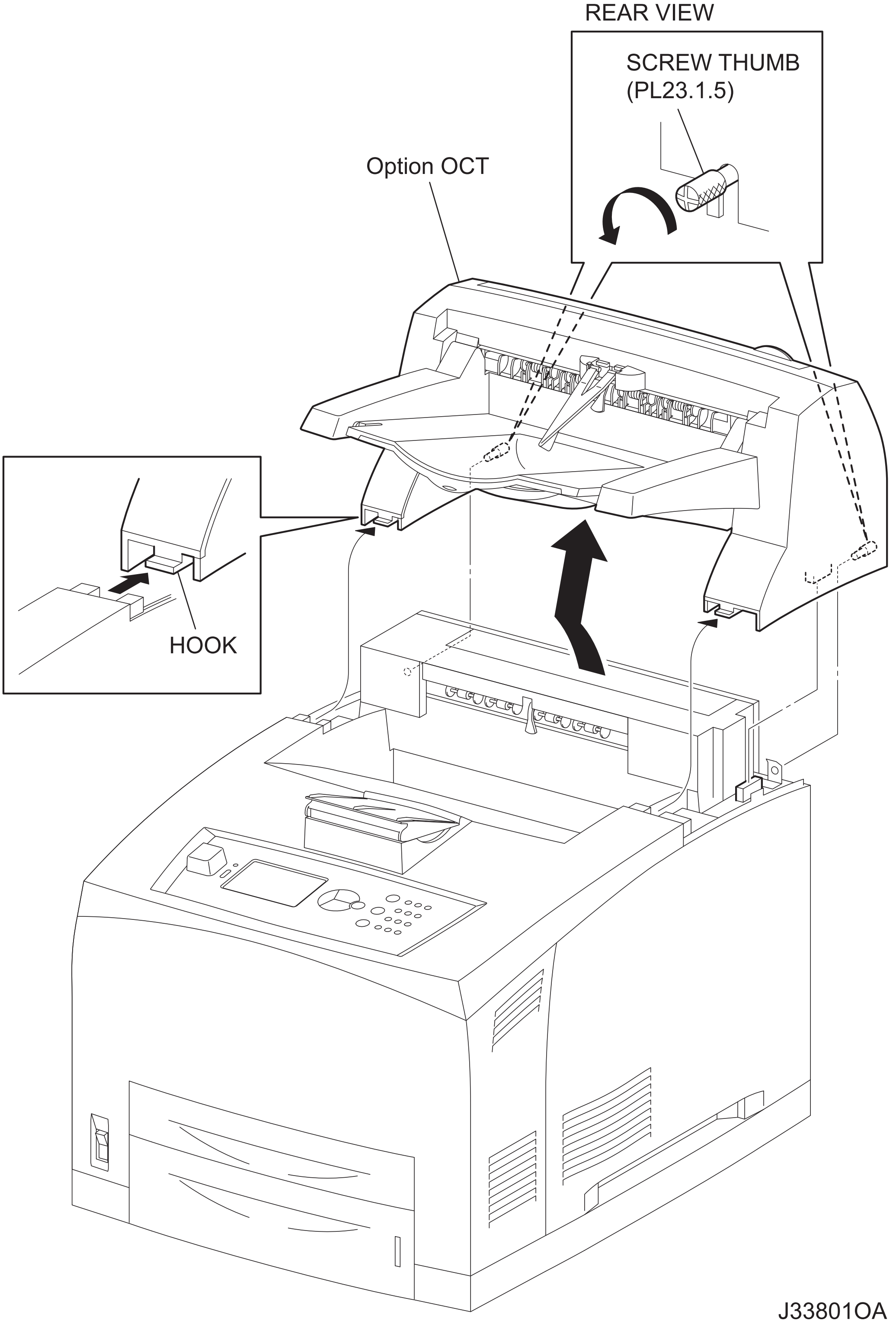
- "RRP X,Y "AAAAA" at the top of procedures represent the part name AAAAA are to be removed and replaced.
- "(PL X.Y.Z)" following the parts name in procedures represent that the parts are those of the plate (PL) "X.Y", item "Z" in Chapter 5, Parts List. Their forms, replacing position or other conditions can be seen in Chapter 5, Parts List.
- In the procedures, directions are represented as follows.
    - Front: Front when you are facing the front of this Option OCT.
    - Rear: Inner direction when you are facing the front of this Option OCT.
    - Left: Left hand when you are facing the front of this Option OCT.
    - Right: Right hand when you are facing the front of this Option OCT.



- The screws in procedures are expressed with their replacing position, color, characteristics and nominal length, etc.
- "RRP X.Y" in the midst or at the end of sentences in the procedures indicate that work procedures related with the "RRP X.Y" are described.
- "Figure X.Y" at the end of the sentences of procedures indicate that illustrations instructive for the "RRP X.Y" are included.
- "Z)" in the illustrations correspond to "Z)" of the service procedures.
- The screws in the illustrations should be removed using a plus (+) screwdriver unless otherwise specified.
- A black arrow in the illustrations indicate movement in the arrow mark direction.
  Numbered black arrows indicate movement in the order of the numbers.
- White arrows (FRONT) in the illustrations indicate the front direction.
- For the positions of the connectors (P/J), refer to Chapter 7, Electric wiring.

RRP23.Option OCT

RRP23.1 Option OCT


REAR VIEW
SCREW THUMB
(PL23.1.5)
Option OCT
HOOK
J33801OA

Removal

NOTE

When removing the Option OCT, be careful not to drop the Option OCT.

1) Loosen the 2 SCREW THUNBs (PL12.1.5) securing the Option OCT to the printer.
2) Lift up the Option OCT, and disconnect the connector (P/J3070) of the HARNESS ASSY OCT2 (PL23.1.25) from the printer,
3) Release the 2 hooks at the bottom side of the COVER OCT (PL23.1.1) from the printer, and remove the Option OCT from the printer.

Replacement

NOTE

When installing the Option OCT, be careful not to drop the Option OCT.

1) Insert the 2 hooks at the bottom side of the COVER OCT (PL23.1.1) into the holes of the printer, and place the Option OCT on the printer. Then, connect the connector (P/J3070) of the HARNESS ASSY OCT2 (PL23.1.25) to the printer.

NOTE

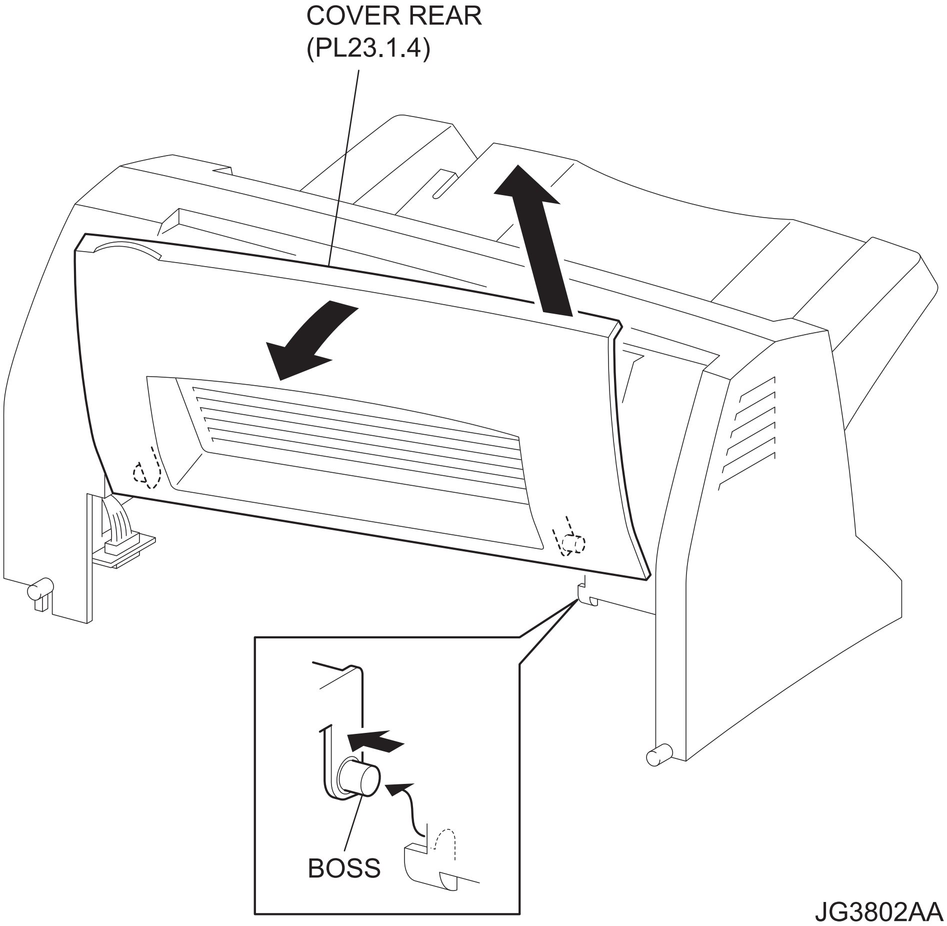
When installing, be sure to install the hooks at the bottom side of the Option OCT into the holes of the printer.

2) Fasten the Option OCT to the printer by tightening the 2 SCREW THUMBs (PL23.1.5).

NOTE

The SCREW THUMB should be completely tightened to fasten the Option OCT.

RRP23.2 COVER REAR (PL23.1.4)


COVER REAR
(PL23.1.4)
BOSS
JG3802AA

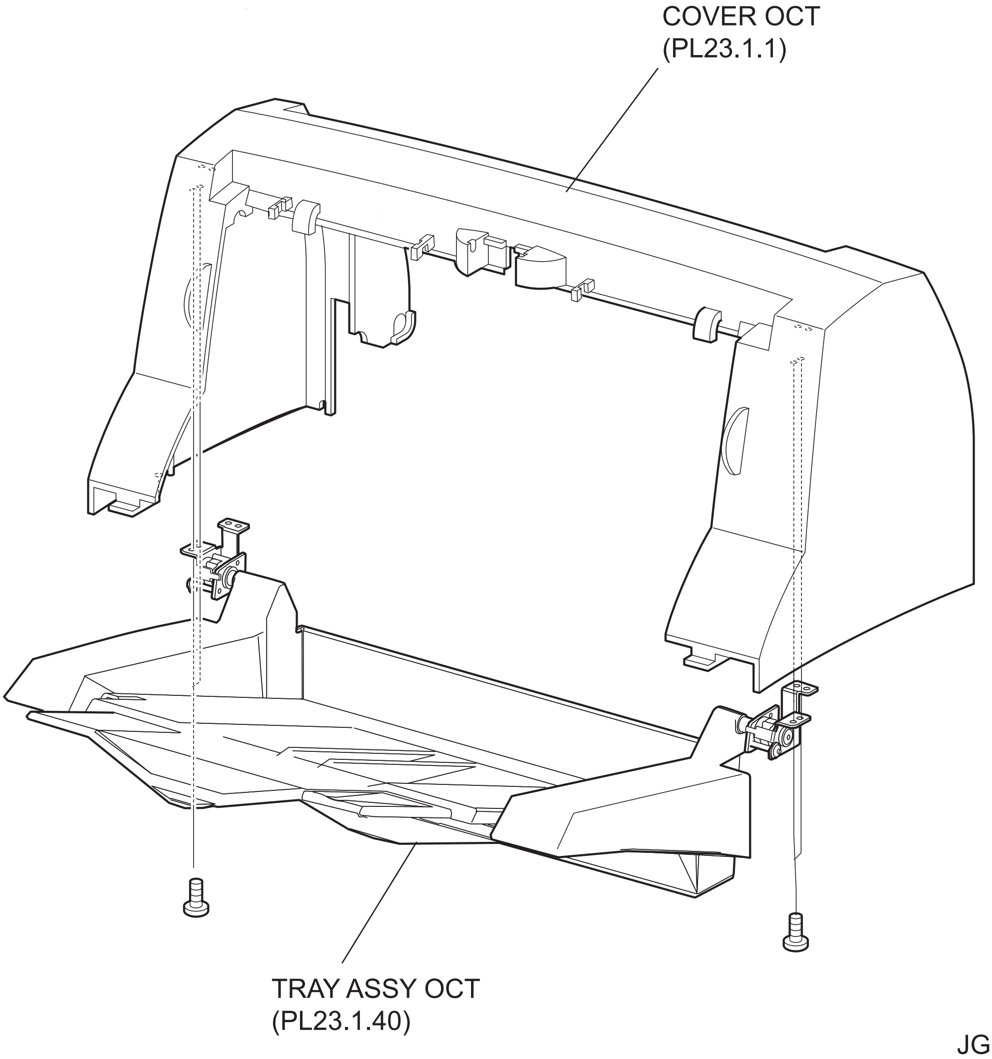
Removal

1) Move the COVER REAR in the direction of the arrows, and remove the bosses on both sides of the COVER REAR from the COVER OCT (PL23.1.1), and then remove the COVER REAR.

Replacement

1) Move the COVER REAR in the opposite direction of the arrows, and insert the bosses on both side of the COVER REAR to the COVER OCT (PL23.1.1).

RRP23.3   TRAY ASSY OCT (PL23.1.40)


COVER OCT
(PL23.1.1)
TRAY ASSY OCT
(PL23.1.40)

JG3819AA

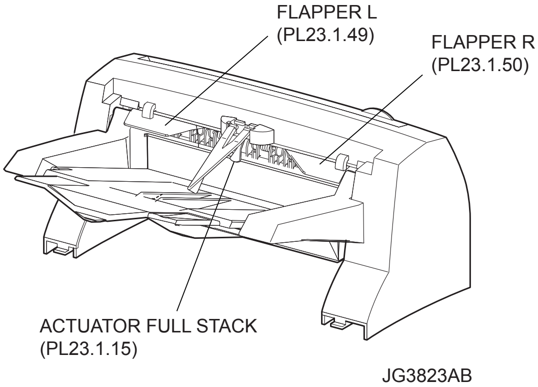
Removal

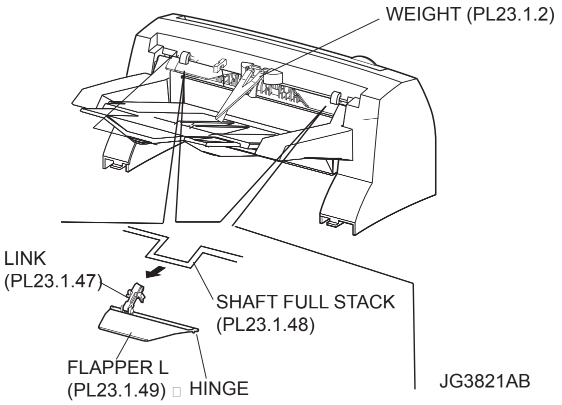
1) Remove the COVER REAR (PL23.1.4). (RRP23.2)
2) Remove the COVER OCT (PL23.1.1). (RRP23.4)
3) Remove the 2 screws (gold tapping, 8mm) on both sides securing the TRAY ASSY OCT to the removed COVER OCT, and remove the TRAY ASSY OCT from the COVER OCT.

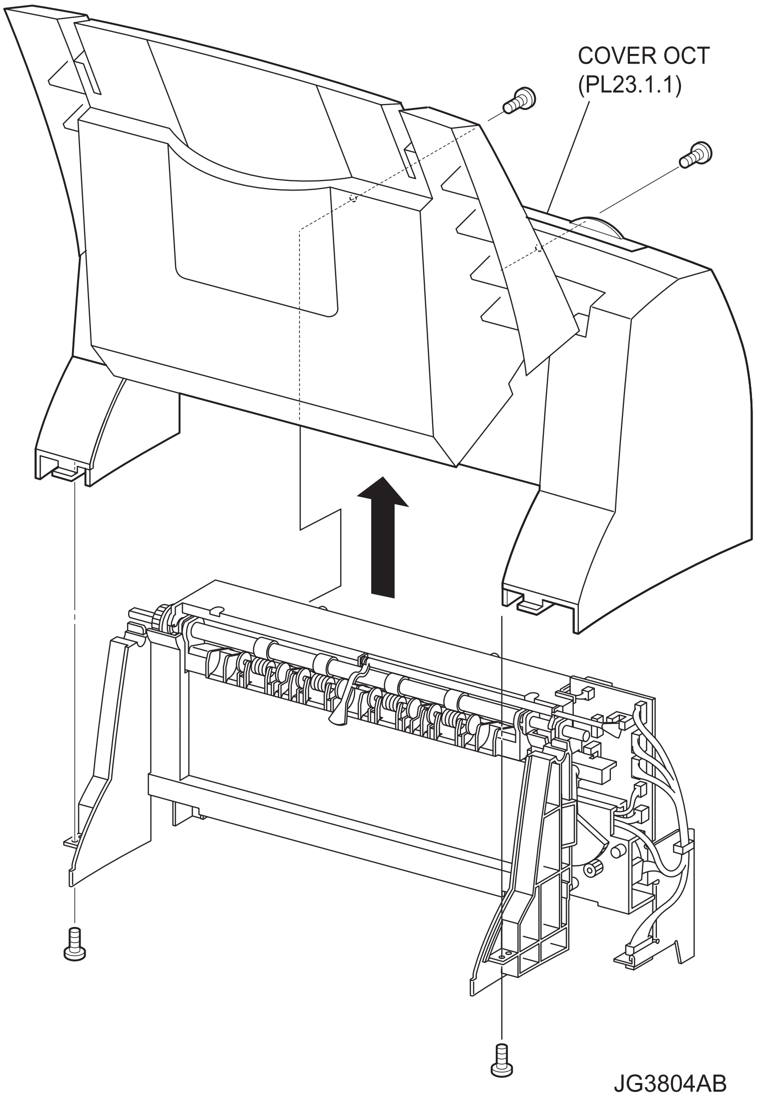
Replacement

1) Install the TRAY ASSY OCT to the COVER OCT (PL23.1.1) using the 2 screws (gold tapping, 8mm) on both sides.
2) Install the COVER OCT. (RRP23.4)
3) Install the COVER REAR (PL23.1.4). (RRP23.2)

RRP23.4 COVER OCT (PL23.1.1)


FLAPPER L
(PL23.1.49)
FLAPPER R
(PL23.1.50)
ACTUATOR FULL STACK
(PL23.1.15)
JG3823AB


WEIGHT (PL23.1.2)
LINK
(PL23.1.47)
SHAFT FULL STACK
(PL23.1.48)
FLAPPER L
(PL23.1.49)
HINGE
JG3821AB


COVER OCT
(PL23.1.1)
JG3804AB

Removal

1) Remove the COVER REAR (PL23.1.4). (RRP23.2)
2) Remove the WEIGHT (PL23.1.2).
3) Remove the hinges on both sides of the FLAPPER L (PL23.1.49) from the COVER OCT (PL23.1.1).
4) Remove the LINK (PL23.1.47) attached to the FLAPPER L from the SHAFT FULL STACK (PL23.1.48).
5) Remove the hinges on both sides of the FLAPPER R (PL23.1.50) from the COVER OCT.
6) Remove the LINK attached to the FLAPPER R from the ACTUATOR FULL STACK (PL23.1.15).
7) Remove the 2 screws (gold tapping, 8mm) at the rear side of the Option OCT securing the COVER OCT to the Option OCT.
8) Remove the 2 screws (gold tapping, 8mm) at the bottom side of the Option OCT securing the COVER OCT to the Option OCT.
9) Open TRAY ASSY OCT (PL23.1.40) to almost 90 degrees, lift COVER OCT with being set to TRAY ASSY OCT, and remove from the body.

NOTE

When lifting COVER OCT, be careful not to break ACTUATOR FULL STACK by TRAY ASSY OCT.

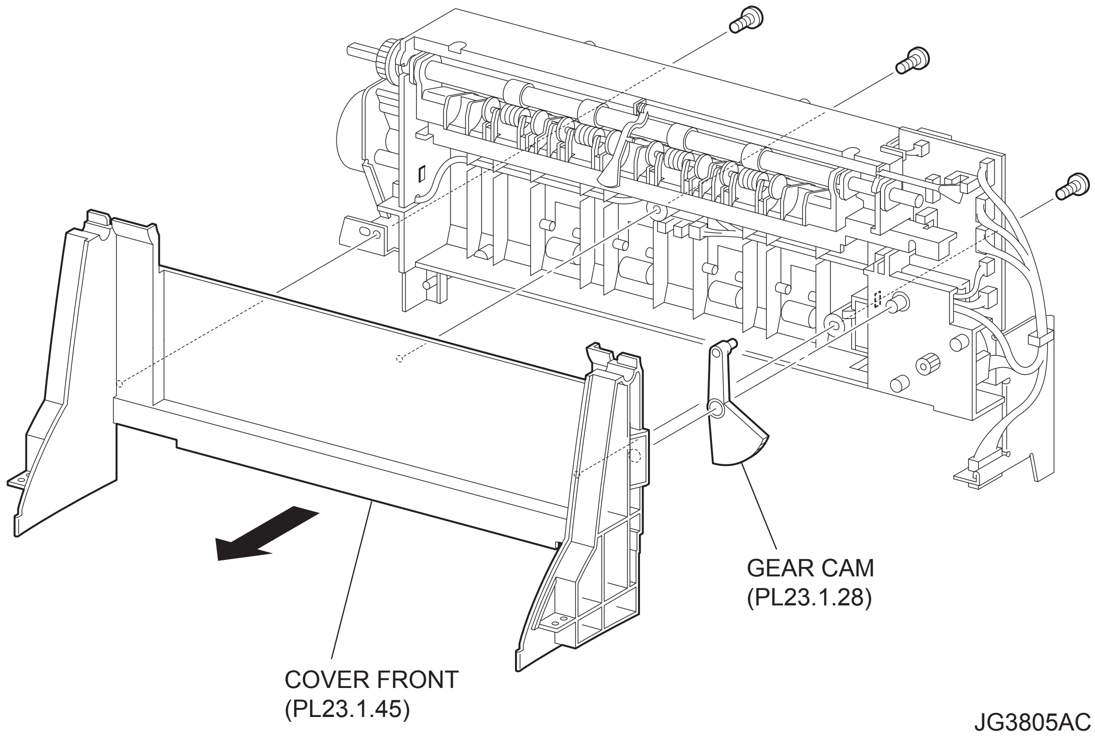
Replacement

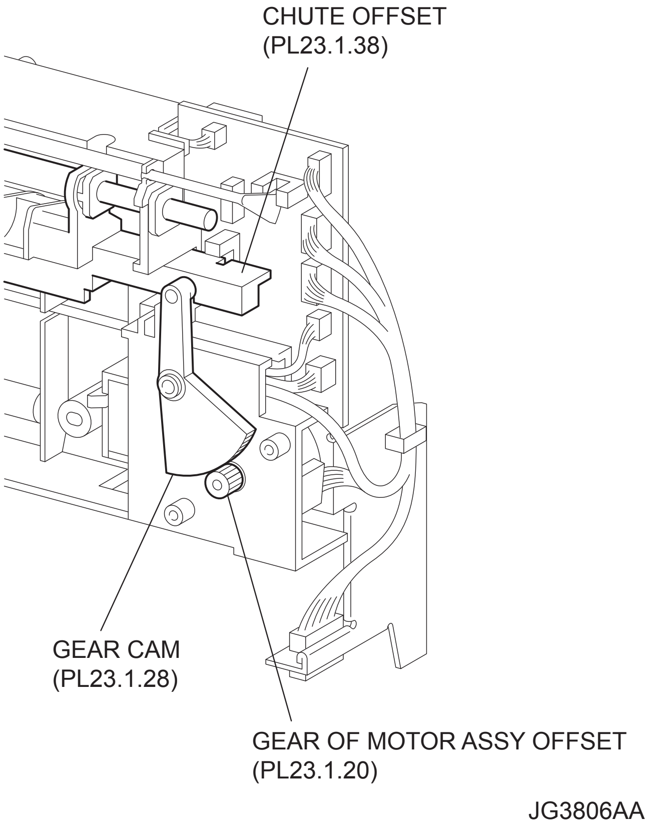
1) Install the COVER OCT to the Option OCT.
2) Secure the COVER OCT to the Option OCT using the 2 screws (gold tapping, 8mm) at the bottom.
3) Secure the COVER OCT to the Option OCT using the 2 screws (gold tapping, 8mm) at the rear.
4) Install the LINK (PL23.1.47) attached with the FLAPPER R (PL23.1.50) to the ACTUATOR FULL STACK (PL23.1.15) from under slanting direction, and install the hinges on both sides of the FLAPPER R to the COVER OCT.
5) Similarly, install the LINK attached with the FLAPPER L (PL23.1.49) to the SHAFT FULL STACK (PL23.1.48) from under slanting direction, and install the hinges on both sides of the FLAPPER L to the COVER OCT.
6) Install tghe WEIGHT (PL23.1.2).
7) Install the COVER REAR (PL23.1.4). (RRP23.2)

NOTE

After installation, when the FLAPPER L is moved with a finger, make sure that the ACTUATOR FULL STACK moves together with the FLAPPER L. Also make sure that FLAPPER R operates smoothly.

RRP23.5   COVER FRONT (PL23.1.45)


GEAR CAM
(PL23.1.28)
COVER FRONT
(PL23.1.45)
JG3805AC


CHUTE OFFSET
(PL23.1.38)
GEAR CAM
(PL23.1.28)
GEAR OF MOTOR ASSY OFFSET
(PL23.1.20)
JG3806AA

Removal

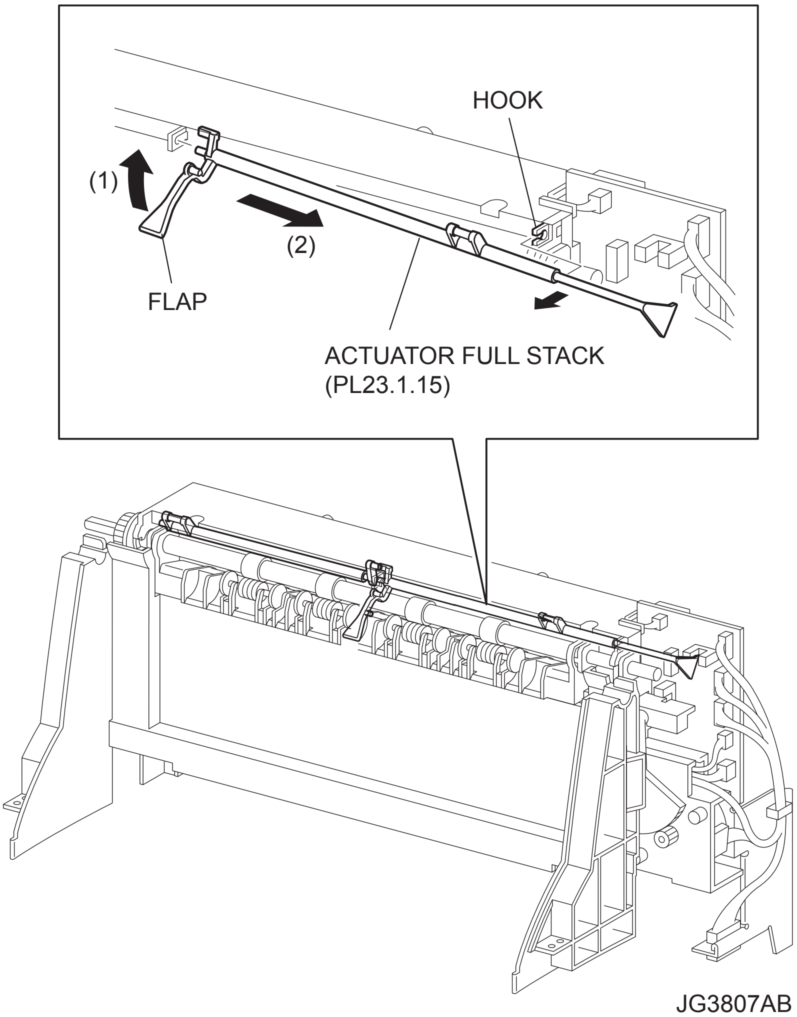
1) Remove the COVER REAR (PL23.1.4). (RRP23.2)
2) Remove the COVER OCT (PL23.1.1). (RRP23.4)
3) Remove the 3 screws (gold tapping, 8mm) securing the COVER FRONT to the Option OCT and remove the COVER FRONT.

NOTE **When removing the COVER FRONT, the GEAR CAM (PL23.1.28) comes off. Be careful not to lose it.**

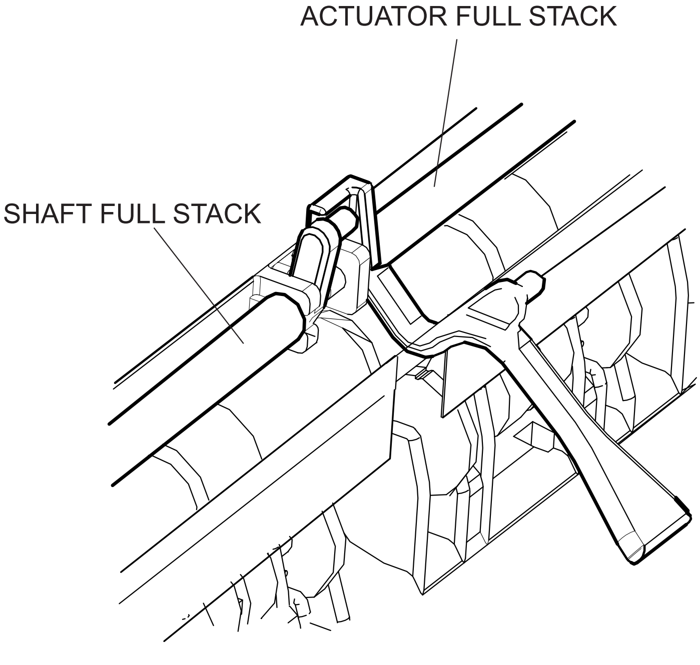
Replacement

1) Make sure that the GEAR CAM (PL23.1.28) and the GEAR of the MOTOR ASSY OFFSET (PL23.1.20) are engaged, and the boss of the GEAR CAM is in the groove of the CHUTE OFFSET (PL23.1.38).
2) Secure the COVER FRONT to the Option OCT using the 3 screws (gold tapping, 8mm).
3) Install the COVER OCT (PL23.1.1). (RRP23.4)
4) Install the COVER REAR (PL23.1.4). (RRP23.2)

RRP23.6 ACTUATOR FULL STACK (PL23.1.15)


HOOK
(1)
(2)
FLAP
ACTUATOR FULL STACK
(PL23.1.15)

JG3807AB


ACTUATOR FULL STACK
SHAFT FULL STACK

JG3822AA

Removal

1) Remove the COVER REAR (PL23.1.4). (RRP23.2)
2) Remove the COVER OCT (PL23.1.1). (RRP23.4)
3) After lifting up the flap of the ACTUATOR FULL STACK in the direction of the arrow (1), remove the hook first, and then move it in the direction of the arrow (2) to remove from the Option OCT.

Replacement

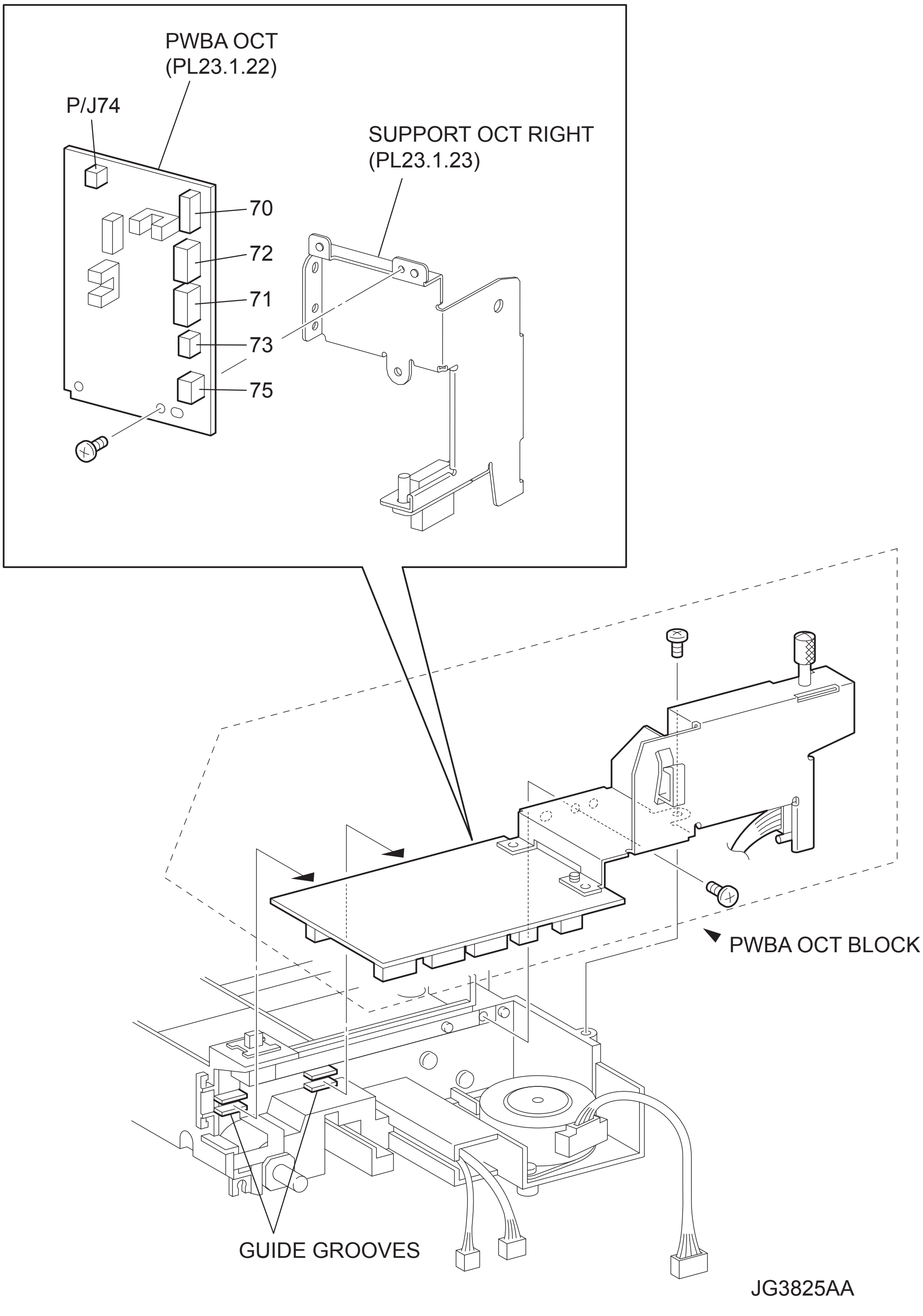
1) Lift up the ACTUATOR FULL STACK in the direction of the arrow (1), and insert it to the hook. Move the ACTUATOR FULL STACK in the opposite direction of the arrow (2) to install.

NOTE **When installing the ACTUATOR FULL STACK to the Option OCT, combine it with the SHAFT FULL STACK as shown in the figure.**

2) Install the COVER OCT (PL23.1.1). (RRP23.4)
3) Install the COVER REAR (PL23.1.4). (RRP23.2)

NOTE **After installation, when the FLAPPER L is moved with a finger, make sure that the ACTUATOR FULL STACK moves together with the FLAPPER L. Also make sure that FLAPPER R operates smoothly.**

RRP23.7   PWBA OCT (PL23.1.22)


PWBA OCT
(PL23.1.22)
P/J74
SUPPORT OCT RIGHT
(PL23.1.23)
70
72
71
73
75
PWBA OCT BLOCK
GUIDE GROOVES
JG3825AA

Removal

1) Remove the COVER REAR (PL23.1.4). (RRP23.2)
2) Remove the COVER OCT (PL23.1.1). (RRP23.4)
3) Remove the ACTATOR FULL STACK in order to prevent from breaking ACTUATOR FULL STACK (PL23.1.15).
4) Release the harness connected to the S/W REAR COVER (PL23.1.18) from the clamp.

NOTE **When disconnecting a harness connector from PWBA OCT shown below, disconnect it by securing PWBA OCT with your hand.**

5) Disconnect the harness connectors from the connectors (P/J70, P/J71, P/J72, P/J73, P/J74 and P/J75) on the PWBA OCT.
6) Remove 2 screws (gold tapping, 8mm) securing the PWBA OCT unit to the HOUSING OCT (PL23.1.14).
7) Remove the PWBA OCT unit.
8) Remove the screw (silver, 6mm) securing the PWBA OCT to the SUPPORT OCT RIGHT (PL23.1.23) of the PWBA OCT unit.
9) Remove the PWBA OCT.

Replacement

1) Install the PWBA OCT to the SUPPORT OCT RIGHT (PL23.1.23) using the screw (silver, 6mm).
2) Install the SUPPORT OCT RIGHT attached with the PWBA OCT to the Option OCT using 2 screws (gold tapping, 8mm).

NOTE **When installing, be sure to install the PWBA OCT into the two guiding ditches of the Option OCT.**

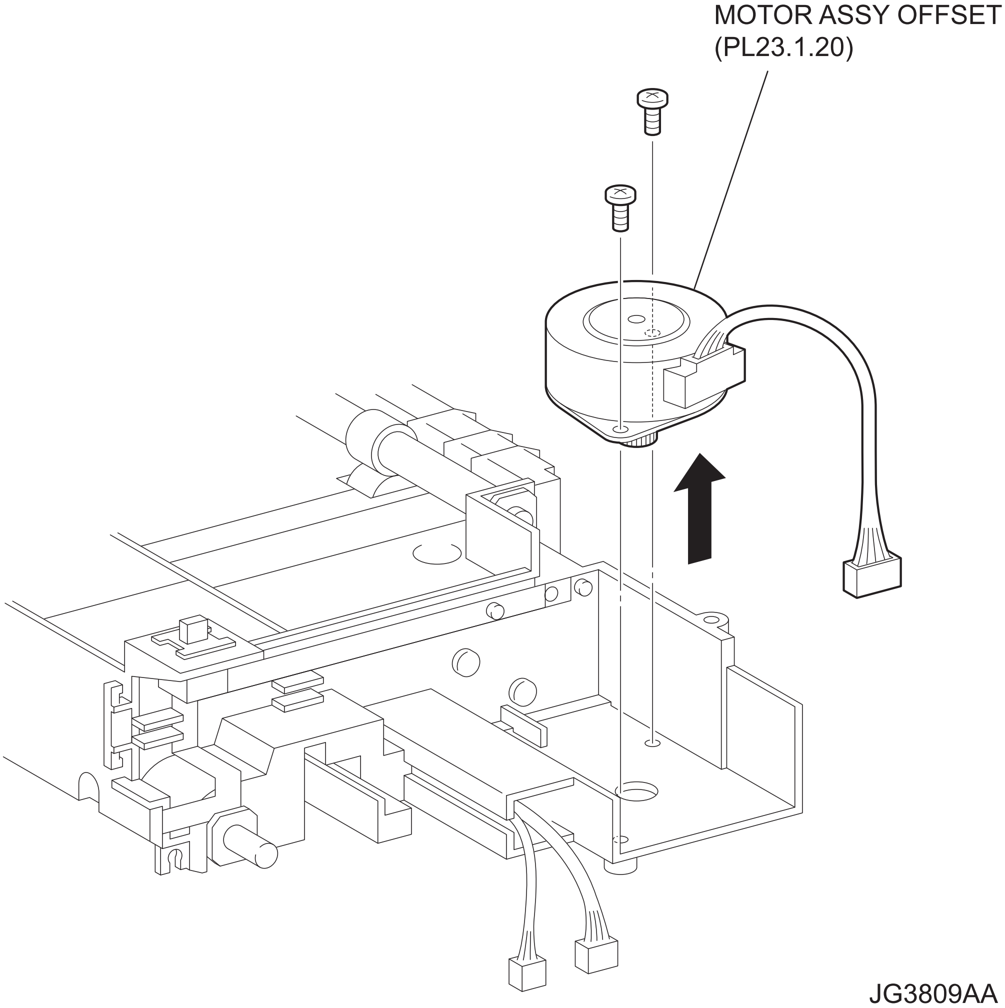
NOTE **When installing, be sure to install the SHUTTER portion of the ACTUATOR FULL STACK (PL23.1.15) into the photo interrupter on the PWBA OCT.**

3) Connect the harness connectors to the connectors (P/J70, P/J71, P/J72, P/J73, P/J74 and P/J75) on the PWBA OCT.

NOTE **When connecting a harness connector, connect it by securing PWBA OCT with your hand.**

4) Secure the harness connected to the S/W REAR COVER (PL23.1.18) using clamp.
5) Install the COVER FRONT (PL23.1.45). (RRP23.5)
6) Install the COVER OCT (PL23.1.1). (RRP23.4)
7) Install the COVER REAR (PL23.1.4). (RRP23.2)

RRP23.8   MOTOR ASSY OFFSET (PL23.1.20)


MOTOR ASSY OFFSET
(PL23.1.20)
JG3809AA

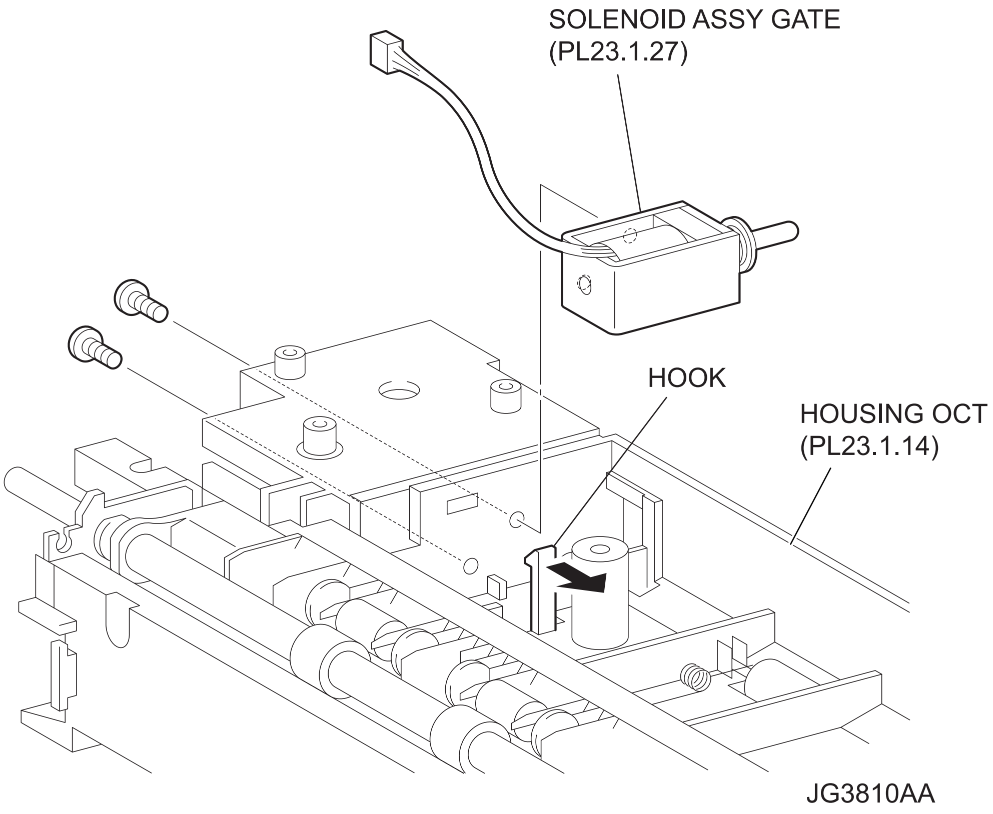
Removal

1) Remove the COVER REAR (PL23.1.4). (RRP23.2)
2) Remove the COVER OCT (PL23.1.1). (RRP23.4)
3) Remove the PWBA OCT (PL23.1.22). (RRP23.7)
4) Remove the 2 screws (gold tapping, 8mm) securing the MOTOR ASSY OFFSET to the Option OCT.
5) Remove the MOTOR ASSY OFFSET.

Replacement

1) Install the MOTOR ASSY OFFSET to the Option OCT using the 2 screws (gold tapping, 8mm).
2) Install the PWBA OCT (PL23.1.22). (RRP23.7)
3) Install the COVER OCT (PL23.1.1). (RRP23.4)
4) Install the COVER REAR (PL23.1.4). (RRP23.2)

RRP23.9 SOLENOID ASSY GATE (PL23.1.27)


SOLENOID ASSY GATE
(PL23.1.27)
HOOK
HOUSING OCT
(PL23.1.14)
JG3810AA

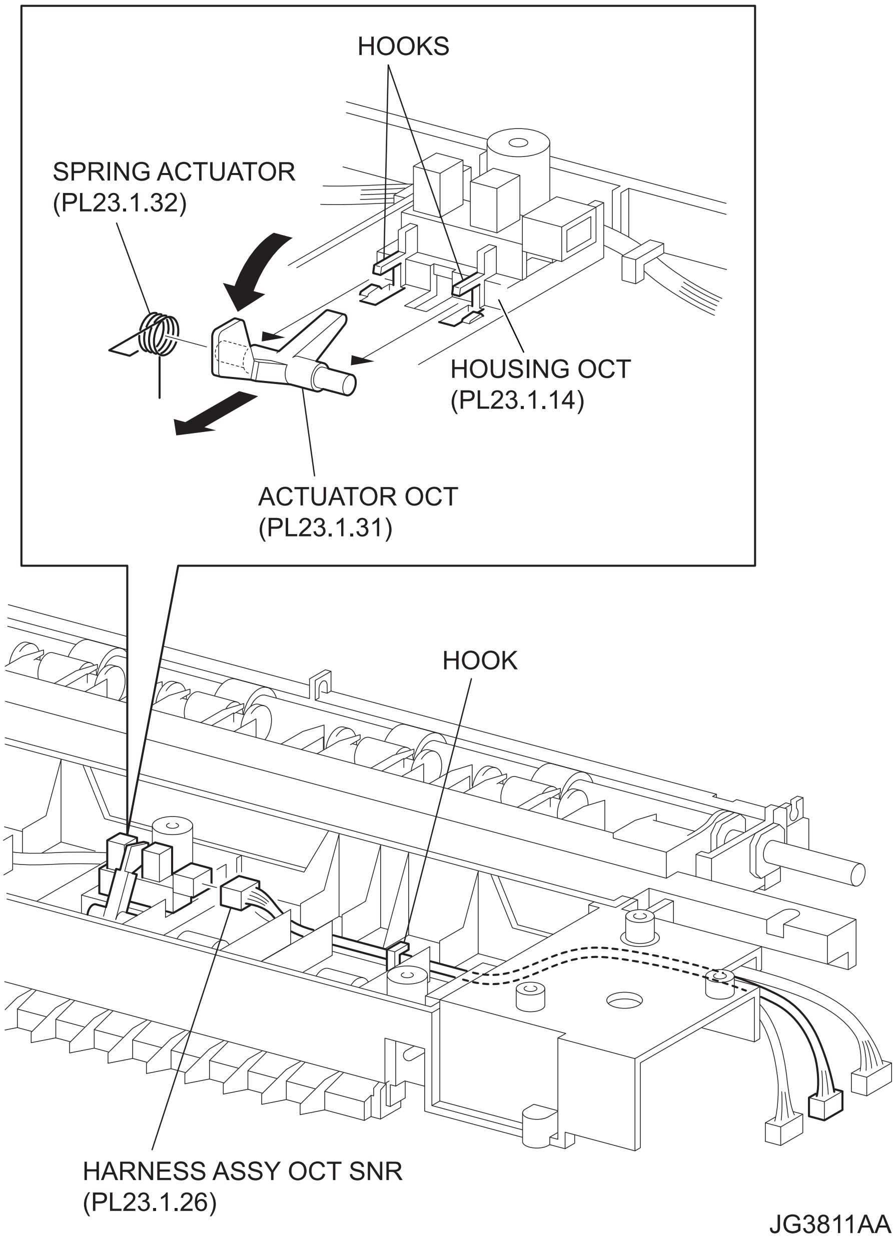
Removal

1) Remove the COVER REAR (PL23.1.4). (RRP23.2)
2) Remove the COVER OCT (PL23.1.1). (RRP23.4)
3) Remove the COVER FRONT (PL23.1.45). (RRP23.5)
4) Remove the PWBA OCT (PL23.1.22). (RRP23.7)
5) Remove the MOTOR ASSY OFSET (PL23.1.20). (RRP23.8)
6) Remove the 2 screws (gold, 6mm) securing the SOLENOID ASSY GATE to the Option OCT.
7) Release the hook securing the SOLENOID ASSY GATE, and remove the SOLENOID ASSY GATE.

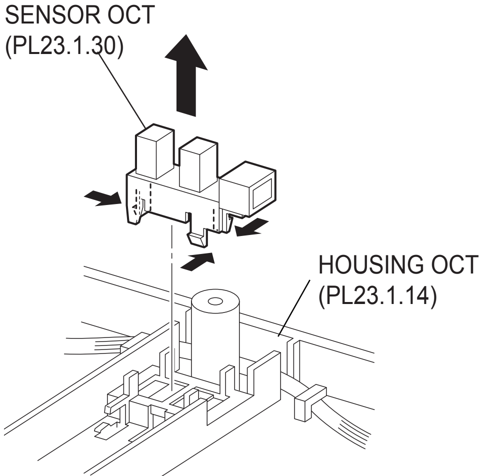
Replacement

1) Secure the SOLENOID ASSY GATE with the hook, and secure it using the 2 screws (gold, 6mm).
2) Install the MOTOR ASSY OFFSET (PL23.1.20). (RRP23.8)
3) Install the PWBA OCT (PL23.1.22). (RRP23.7)
4) Install the COVER FRONT (PL23.1.45). (RRP23.5)
5) Install the COVER OCT (PL23.1.1). (RRP23.4)
6) Install the COVER REAR (PL23.1.4). (RRP23.2)

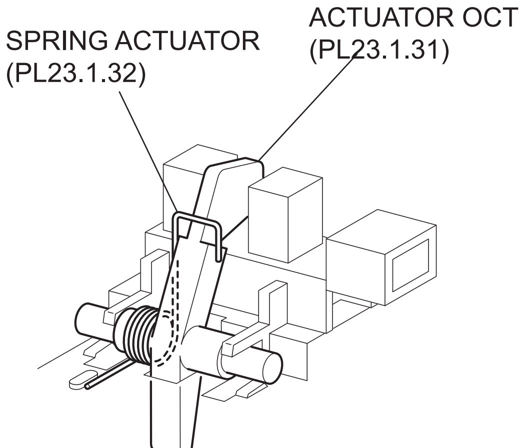
RRP23.10 SENSOR OCT (PL23.1.30)


HOOKS
SPRING ACTUATOR
(PL23.1.32)
HOUSING OCT
(PL23.1.14)
ACTUATOR OCT
(PL23.1.31)
HOOK
HARNESS ASSY OCT SNR
(PL23.1.26)

JG3811AA


SENSOR OCT
(PL23.1.30)
HOUSING OCT
(PL23.1.14)

JG3812AA


SPRING ACTUATOR
(PL23.1.32)
ACTUATOR OCT
(PL23.1.31)

JG3813AA

Removal

1) Remove the COVER REAR (PL23.1.4). (RRP23.2)
2) Remove the COVER OCT (PL23.1.1). (RRP23.4)
3) Remove the COVER FRONT (PL23.1.45). (RRP23.5)
4) Release the HARNESS ASSY OCT SNR (PL23.1.26) from the hooks.
5) Disconnect the connector (P/J730) of the HARNESS ASSY OCT SNR from the SENSOR OCT.
6) Remove the SPRING ACTUATOR (PL23.1.32).
7) Shift the ACTUATOR OCT (PL23.1.31) in the direction of the arrows to remove it from the hooks on both sides .
8) Release the hooks of the SENSOR OCT, and remove it from the HOUSING OCT (PL23.1.14).

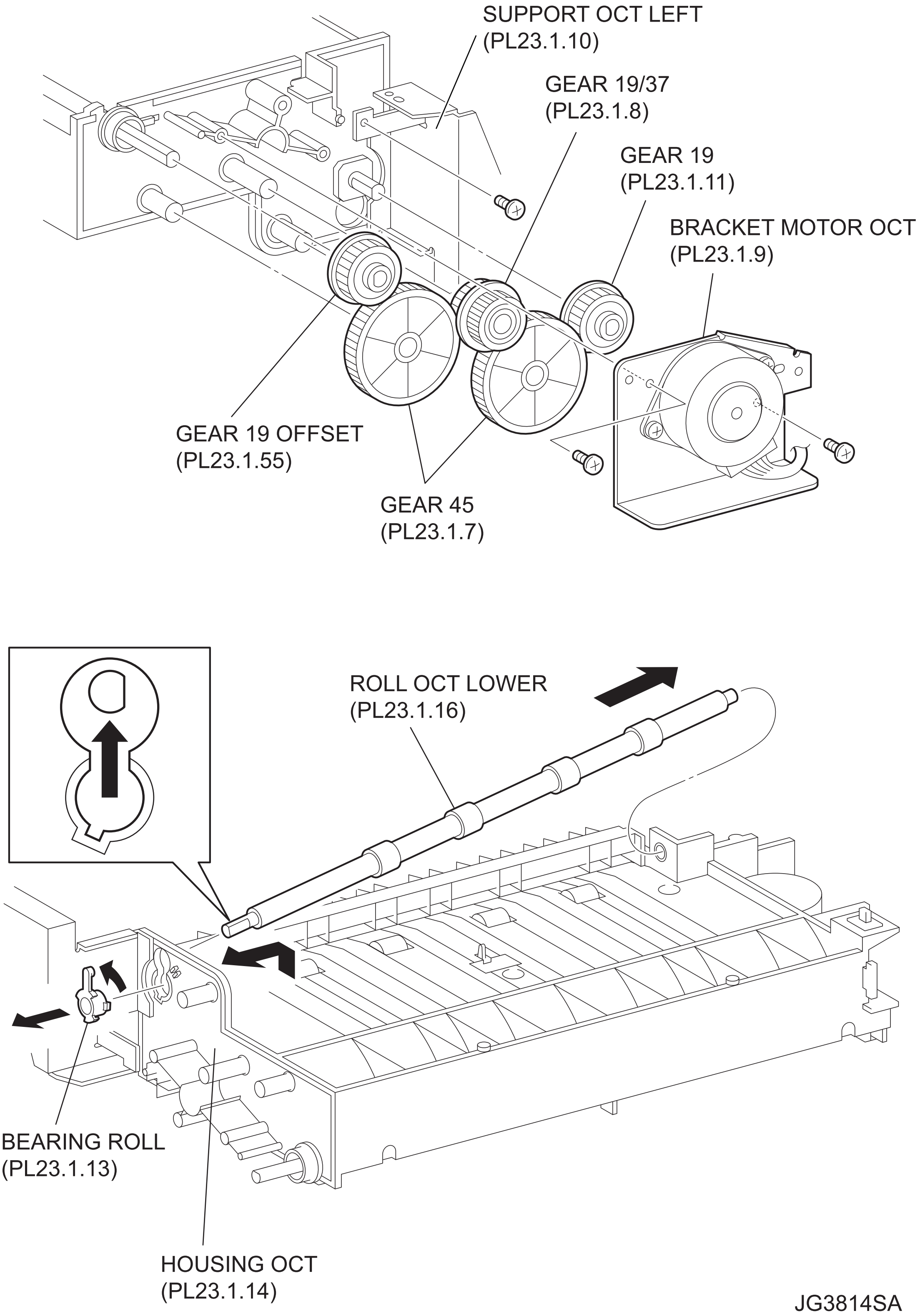
Replacement

1) Install the SENSOR OCT to the HOUSING OCT (PL23.1.14), and secure it with the hooks.
2) Move the ACTUATOR OCT in the opposite direction of the arrows, and secure it with the hooks.
3) Install the SPRING ACTUATOR (PL23.1.32).

NOTE **Install the SPRING ACTUATOR to the ACTUATOR OCT as shown in the figure.**

4) Connect the connector (P/J730) of the HARNESS ASSY OCR SNR (PL23.1.26) to the SENSOR OCT.
5) Secure the HARNESS ASSY OCT SNR with the hooks.
6) Install the COVER FRONT (PL23.1.45). (RRP23.5)
7) Install the COVER OCT (PL23.1.1). (RRP23.4)
8) Install the COVER REAR (PL23.1.4). (RRP23.2)

RRP23.11 ROLL OCT LOWER (PL23.1.16)


SUPPORT OCT LEFT
(PL23.1.10)
GEAR 19/37
(PL23.1.8)
GEAR 19
(PL23.1.11)
BRACKET MOTOR OCT
(PL23.1.9)
GEAR 19 OFFSET
(PL23.1.55)
GEAR 45
(PL23.1.7)
ROLL OCT LOWER
(PL23.1.16)
BEARING ROLL
(PL23.1.13)
HOUSING OCT
(PL23.1.14)
JG3814SA

Removal

1) Remove the COVER REAR (PL23.1.4). (RRP23.2)
2) Remove the COVER OCT (PL23.1.1). (RRP23.4)
3) Remove the 2 screws (gold tapping, 8mm, gold 6mm) securing the SUPPORT OCT LEFT (PL23.1.10).
4) Remove the 2 screws (gold tapping, 8mm) securing the BRACKET MOTOR OCT (PL23.1.9).
5) Disconnect the harness conector of the MOTOR ASSY OCT , and remove the BRACKET MOTOR OCT together with the MOTOR ASSY OCT (PL23.1.6).
6) Remove the GEAR 45 (PL23.1.7), the GEAR 19/37 (PL23.1.8), the GEAR 19 (PL23.1.11) and the GEAR 19 OFFSET (PL23.1.55).
7) Release the hook of the BEARING ROLL (PL23.1.13) on the side of GEAR 19 , and remove it from the HOUSING OCT (PL23.1.14).

NOTE **Be careful handling the hook of the BEARING ROLL. It is fragile and could break if given excessive force.**

8) Shift the ROLL OCT LOWER in the direction of the arrow to remove.

NOTE **When removing, do not hold the rubber rollers of the ROLL OCT LOWER.**

Replacement

1) Shift the ROLL OCT LOWER in the opposite direction of the arrow to install.

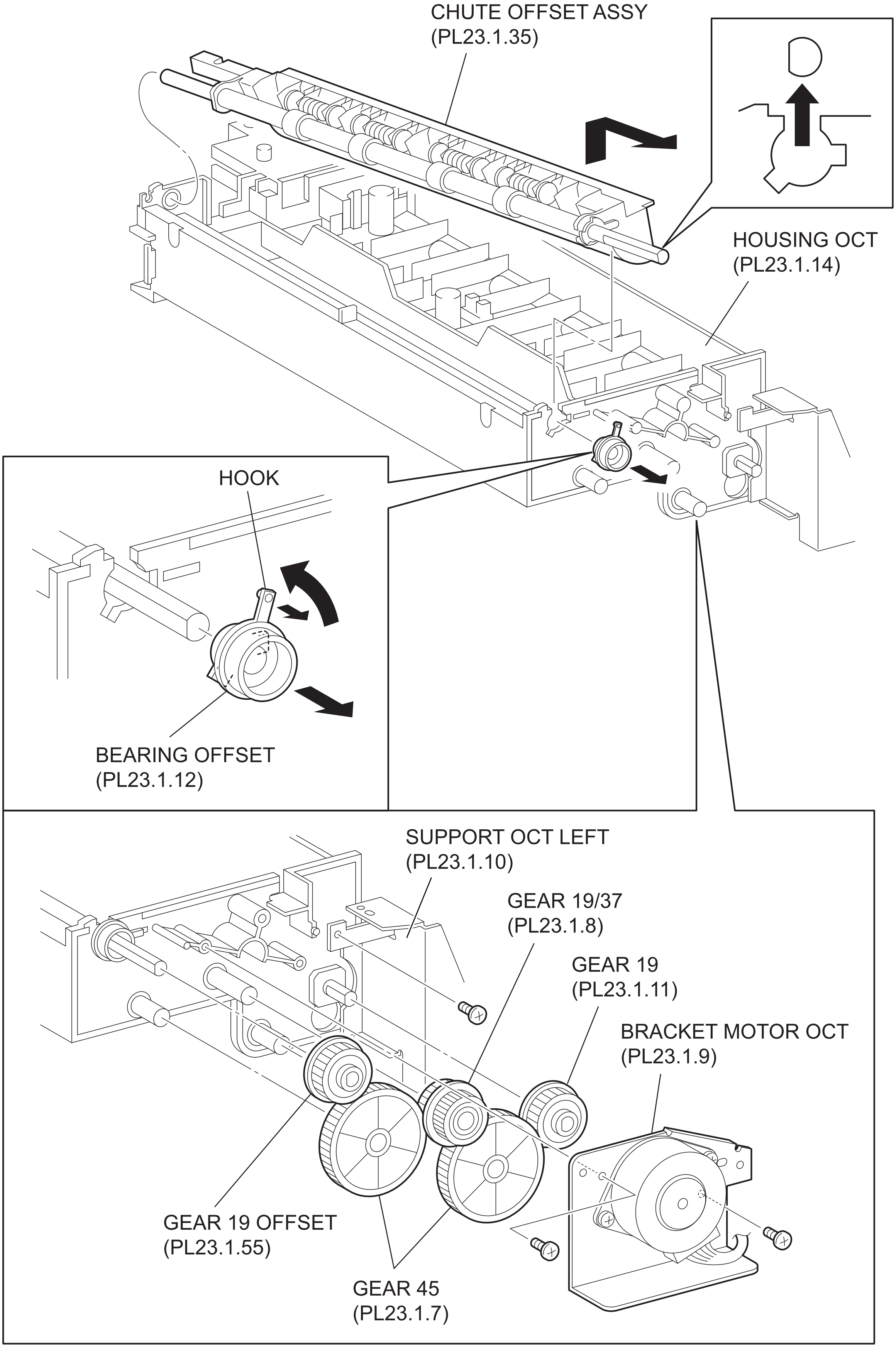
NOTE **When installing, do not hold the rubber rollers of the ROLL OCT LOWER.**

2) Install the BEARING ROLL to the HOUSING OCT at the GEAR 19 side.
3) Install the GEAR 19 OFFSET (PL23.1.55), the GEAR 19 (PL23.1.11), the GEAR 45 (PL23.1.7) and the GEAR 19/37 (PL23.1.6) in order.

NOTE **When installing the GEAR 19, be careful in the installing direction.**

4) Install the BRACKET MOTOR OCT (PL23.1.9) using the 2 screws (gold tapping, 8mm).
5) Install the SUPPORT OCT LEFT using the 2 screws (gold tapping, 8mm, gold 6mm).
6) Install the COVER OCT (PL23.1.1). (RRP23.4)
7) Install the COVER REAR (PL23.1.4). (RRP23.2)

RRP23.12 ROLL OCT UPPER (PL23.1.36)


CHUTE OFFSET ASSY
(PL23.1.35)
HOUSING OCT
(PL23.1.14)
HOOK
BEARING OFFSET
(PL23.1.12)
SUPPORT OCT LEFT
(PL23.1.10)
GEAR 19/37
(PL23.1.8)
GEAR 19
(PL23.1.11)
BRACKET MOTOR OCT
(PL23.1.9)
GEAR 19 OFFSET
(PL23.1.55)
GEAR 45
(PL23.1.7)

JG3815SA

Removal

1) Remove the COVER REAR (PL23.1.4). (RRP23.2)
2) Remove the COVER OCT (PL23.1.1). (RRP23.4)
3) Remove the COVER FRONT (PL23.1.45). (RRP23.5)
4) Remove the GEAR CAM (PL23.1.28). (Figure 23.5)
5) Remove the 2 screws (gold tapping, 8mm, gold 6mm) securing the SUPPORT OCT LEFT (PL23.1.10).
6) Remove the 2 screws (gold tapping, 8mm) securing the BRACKET MOTOR OCT (PL23.1.9).
7) Disconnect the harness conector of the MOTOR ASSY, and remove the BRACKET MOTOR OCT together with the MOTOR ASSY OCT (PL23.1.6).
8) Remove the GEAR 45 (PL23.1.7), the GEAR 19/37 (PL23.1.8), the GEAR 19 (PL23.1.11) and the GEAR 19 OFFSET (PL23.1.55).
9) Release the hook of the BEARING OFFSET (PL23.1.12), and turn it in the direction of the arrow. Remove the BEARING OFFSET from the HOUSING OCT (PL23.1.14).
10) Release the hook of the BEARING ROLL (PL23.1.13) on the other side, and remove it. Remove the CHUTE OFFSET ASSY (PL23.1.35).
11) Release the hook of the 2 BEARING ROLLs (PL23.1.13) on one side, and remove them.
12) Remove the ROLL OCT UPPER from the CHUTE OFFSET ASSY.

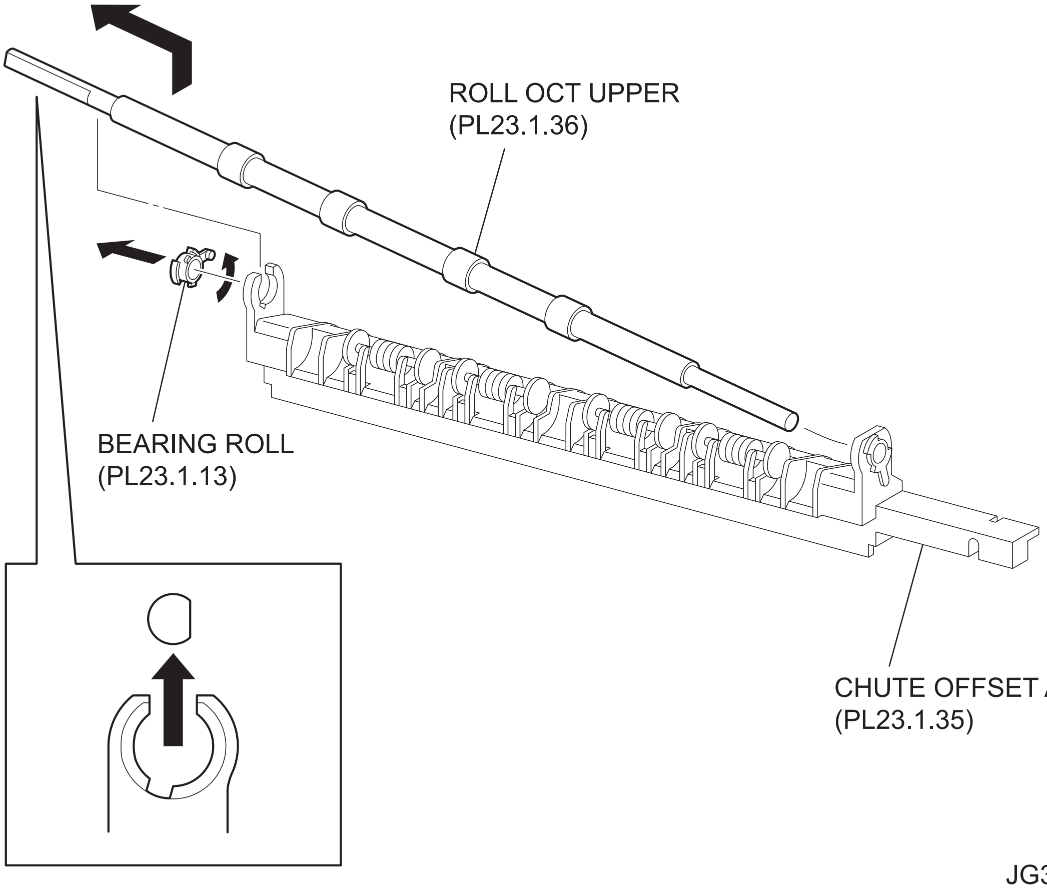
Replacement

1) Install the ROLL OCT UPPER to the CHUTE OFFSET ASSY (PL23.1.35).
2) Install the 2 BEARING ROLLs (PL23.1.13) to the CHUTE OFFSET ASSY.
3) Install the BEARING ROLL (PL23.1.13) to the HOUSING OCT (PL23.1.14).
4) Install the CHUTE OFFSET ASSY to the HOUSING OCT. Install the BEARING OFFSET (PL23.1.12), and secure it with the hook.
5) Install the GEAR 19 OFFSET (PL23.1.55), the GEAR 19 (PL23.1.11), the GEAR 45 (PL23.1.7) and the GEAR 19/37 (PL23.1.8) in order.

NOTE

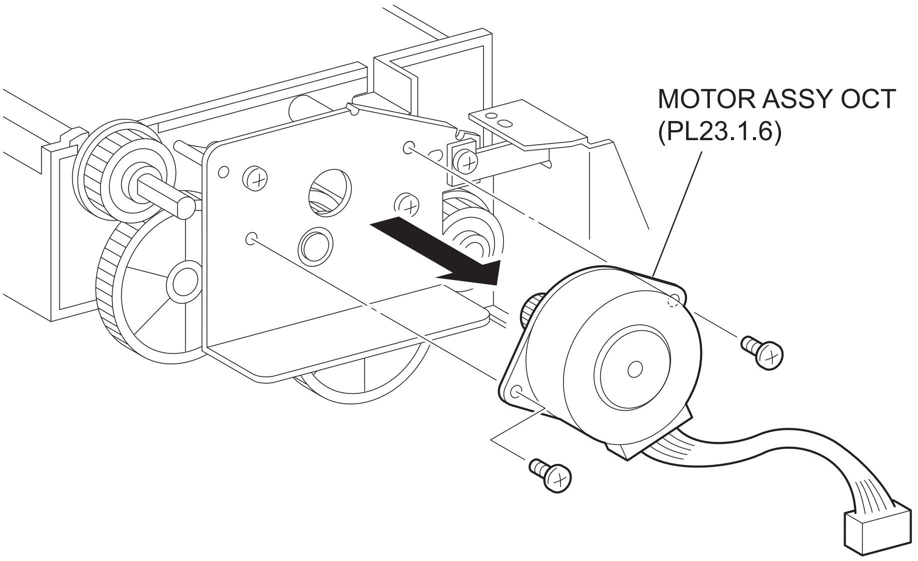
When installing the GEAR 19, be careful in the installing direction.

6) Install the BRACKET MOTOR OCT (PL23.1.9) using the 2 screws (gold tapping, 8mm).
7) Install the SUPPORT OCT LEFT using the 2 screws (gold tapping, 8mm, gold 6mm).
8) Install the GEAR CAM (PL23.1.28). (Figure 23.5)
9) Install the COVER FRONT (PL23.1.45). (RRP23.5)
10) Install the COVER OCT (PL23.1.1). (RRP23.4)
11) Install the COVER REAR (PL23.1.4). (RRP23.2)


ROLL OCT UPPER
(PL23.1.36)
BEARING ROLL
(PL23.1.13)
CHUTE OFFSET ASSY
(PL23.1.35)
JG3816AB

Blank Page

RRP23.13 MOTOR ASSY OCT (PL23.1.6)


MOTOR ASSY OCT
(PL23.1.6)

JG3817AA

Removal

1) Remove the COVER REAR (PL23.1.4). (RRP23.2)
2) Remove the COVER OCT (PL23.1.1). (RRP23.4)
3) Disconnect the connector of the MOTOR ASSY OCT from the HARNESS ASSY OCT MOT (PL23.1.46).
4) Remove the 2 screws (gold, 8mm) securing the MOTOR ASSY OCT, and remove the MOTOR ASSY OCT.

Replacement

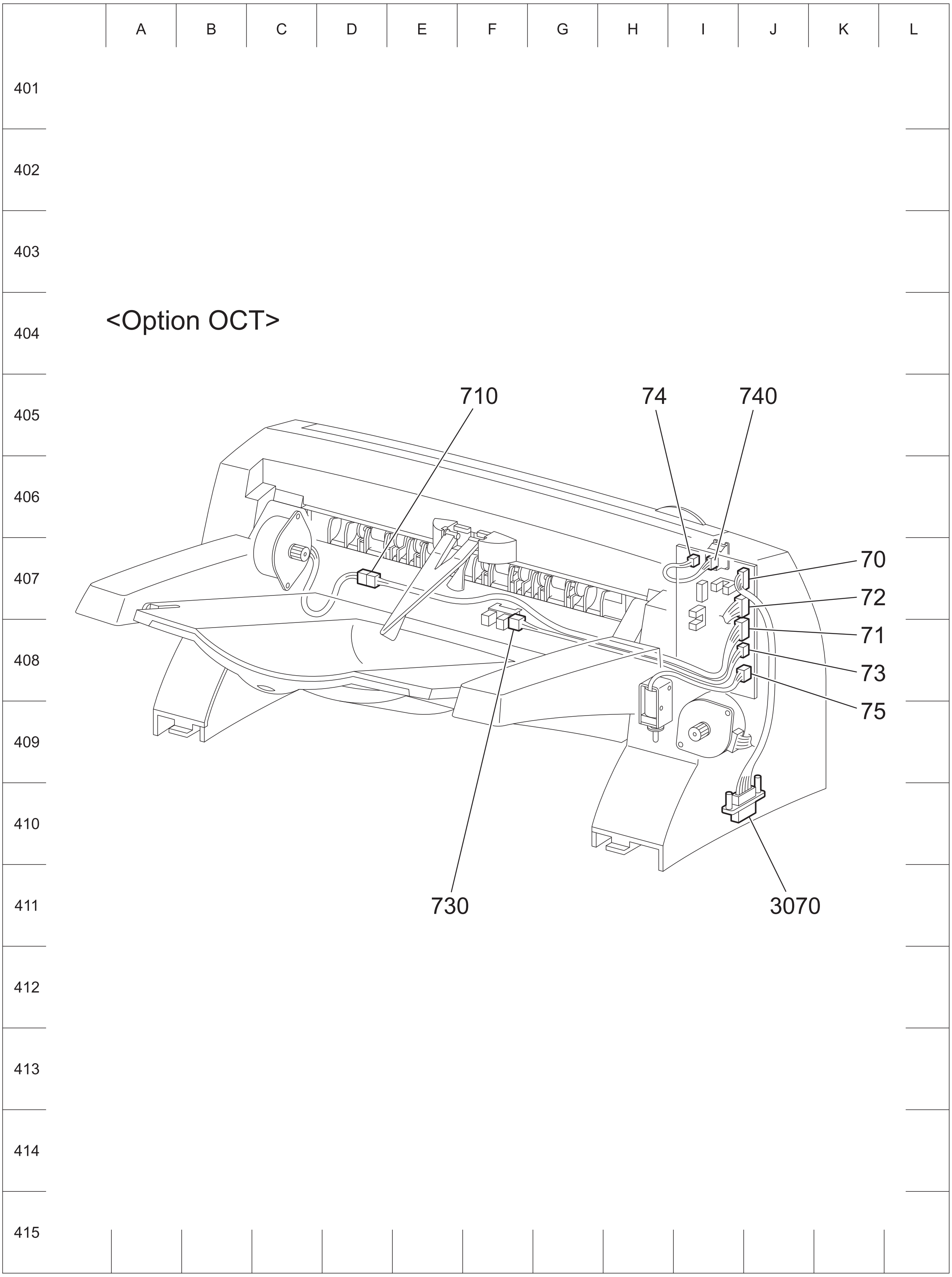
1) Secure the MOTOR ASSY OCT using the 2 screws (gold, 8mm).
2) Connect the connector of the MOTOR ASSY OCT to the HARNESS ASSY OCT MOT (PL23.1.46).
3) Install the COVER FRONT (PL23.1.45). (RRP23.5)
4) Install the COVER OCT (PL23.1.1). (RRP23.4)
5) Install the COVER REAR (PL23.1.4). (RRP23.2)

4. Connector [P (plug) / J (jack)]

4.1 List of P/J

P/J	Coordiates	Remarks
70	J-407	Connects HARNESS ASSY OCT2 and PWBA OCT
71	J-408	Connects HARNESS ASSY OCT MOT and PWBA OCT
72	J-407	Connects MOTOR ASSY OFFSET and PWBA OCT
73	J-408	Connects HARNESS ASSY OCT SNR and PWBA OCT
74	I-407	Connects HARNESS ASSY REAR COVER and PWBA OCT
75	J-408	Connects SOLENOID ASSY GATE and PWBA OCT
710	F-405	Connects HARNESS ASSY OCT MOT and MOTOR ASSY OCT
730	F-408	Connects SENSOR OCT and HARNESS ASSY OCT SNR
740	I-407	Connects SWITCH REAR COVER and HARNESS ASSY REAR COVER
3070	J-410	Connects HARNESS ASSY OCT2 and HARNESS ASSY OCT1

4.2 P/J layout diagram

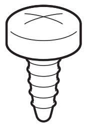
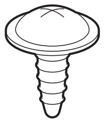
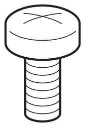
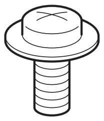
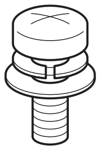
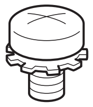
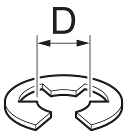

A
B
C
D
E
F
G
H
I
J
K
L
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
<Option OCT>
710
74
740
70
72
71
73
75
730
3070

JG4801AA

5. Parts List

5.1 Caution for use of parts list

- ◆ The figures indicating the illustrations are the item No. in the list and present correspondence between the illustrations and parts.
- ◆ The notation of PL "X.Y.Z" is composed of the plate (PL), item "X.Y", and parts "Z".
- ◆ The alphabet characters in the illustrations represent screws and clips as follows:

Type	Shape	PL No.	Size	PARTS No.
Screw for plastic Silver, tapping		S1	M3X6mm	153W27678
		S2	M3X8mm	153W27878
		S3	M3X30mm	826E11030
		S4	M3X29mm	826E29000
		S5	M3X22mm	826E13551
Screw for plastic Silver, with flange, tapping		S6	M3X8mm	826E13590
Screw for metal sheet Silver		S7	M3X6mm	026E14990
		S8	M3X6mm	026E16550
		S9	M3X6mm	826E12480
		S10	M3X10mm	826E22420
Screw for metal sheet Silver, with flange		S11	M3X8mm	026E87840
		S12	M3X8mm	826E22380
Screw for metal sheet Silver, with lock washer		S13	M3X8mm	112W27898
		S14	M3X10mm	112W28098
Screw for metal sheet Silver, with an external tooth washer		S15	M4X5mm	826E25640
Ring-E		E1	D3	354W21278
		E2	D4	354W24278

- ◆ "t" mark in the illustrations are attached to items indicating assembly parts in the illustrations.
- ◆ Encircled alphabetical figures in the illustrations indicate interrupted leader lines. Same characters in the illustrations represent lines to be connected.
- ◆ The mark "(with 2-5)" attached to assembly parts on the illustrations and lists represents that the items "2, 3, 4, and 5" of that plate are contained and the mark "(with 2-5, PL6.1.1) represent that the item "2, 3, 4, and 5" of that plate and the item "1" of the plate "6.1" are contained.
- ◆ The mark "[Same PLX.Y.Z]" attached to parts in the illustrations and lists resents that the parts is the same as the parts of the item "Z" of the plate "X.Y".

- The mark "H" attached to the item in the list represents "recommended spare parts" which can be usually supplied. (Supply of other parts shall be examined separately.)
- The mark "[" attached to parts in the list represents "Note" or "Reference" about that parts is contained in the same page.
- "HIGH ASSY" in the list represent the high level assembly parts containing that parts.

NOTE

For spare parts, refer to the "Spare parts list" which is issued separately.

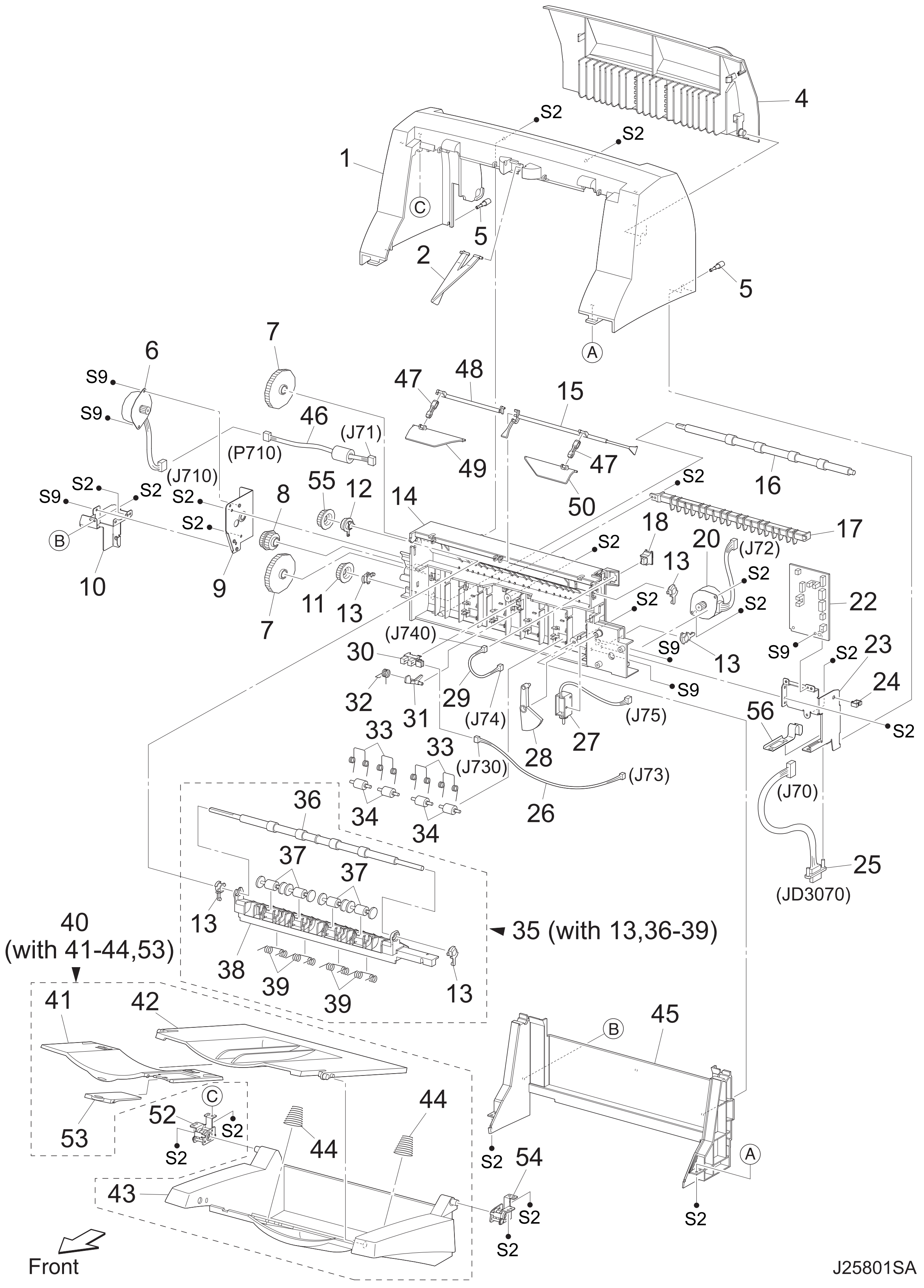
NOTE

For the connector (P/J), parts such as harness, wire, etc. in the list, refer to "Chapter 7, Wiring Diagrams and Signal Information"

NOTE

It should be noted that configuration of parts may be different or some parts are not used depending on specifications of OEM.

PL23.1 Option OCT [Illustration]


4
S2
S2
1
C
5
2
5
A
7
6
S9
S9
47
48
15
46
(J71)
(P710)
49
47
(J710)
16
S2
S2
S9
S2
S2
S2
55
12
8
14
50
S2
18
17
20
(J72)
B
10
9
11
13
7
13
S2
22
S2
S2
(J740)
30
S9
13
S9
23
S2
24
29
32
S9
31
(J74)
(J75)
56
S2
33
33
27
28
(J730)
(J73)
26
(J70)
34
34
36
25
37
37
(JD3070)
40
(with 41-44,53)
13
35 (with 13,36-39)
38
39
39
13
41
42
45
B
44
C
52
S2
53
S2
44
S2
54
43
A
S2
S2
S2
Front
J25801SA

PL23.1 Option OCT [List]

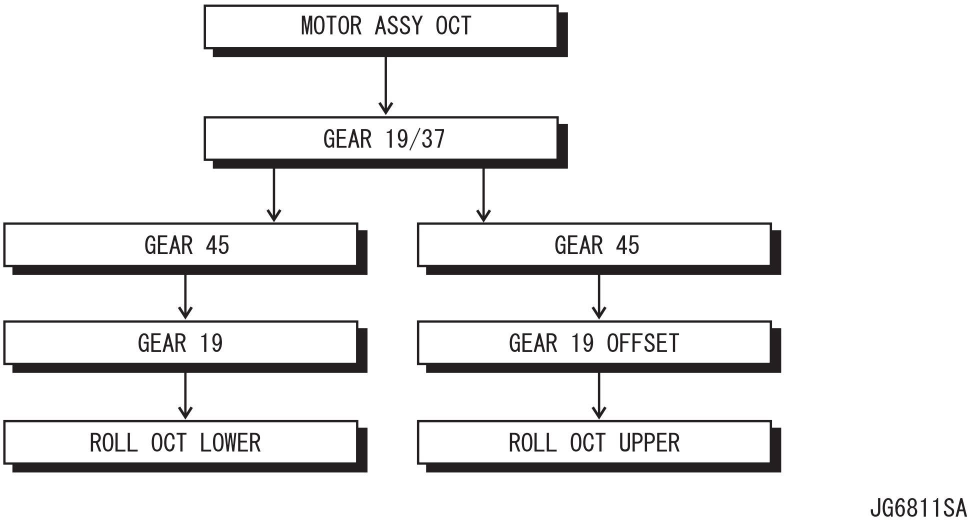
Item	Parts name
1	COVER OCT
2	WEIGHT
3	- -
4	COVER REAR
5	SCREW THUMB
6	MOTOR ASSY OCT (J710)
7	GEAR 45
8	GEAR 19/37
9	BRACKET MOTOR OCT
10	SUPPORT OCT LEFT
11	GEAR 19
12	BEARING OFFSET
13	BEARING ROLL
14	HOUSING OCT
15	ACTUATOR FULL STACK
16	ROLL OCT LOWER
17	CHUTE INLET
18	S/W REAR COVER (P740)
19	- -
20	MOTOR ASSY OFFSET (J72)
21	- -
22	PWBA OCT
23	SUPPORT OCT RIGHT
24	CLAMP MINI
25	HARNESS ASSY OCT 2 (J70-JD3070)
26	HARNESS ASSY OCT SNR (J73-J730)
27	SOLENOID ASSY GATE (J75)
28	GEAR CAM
29	HARNESS ASSY REAR COVER (J74-J740)
30	SENSOR OCT (P730)
31	ACTUATOR OCT
32	SPRING ACTUATOR
33	SPRING PINCH
34	ROLL PINCH
35	CHUTE OFFSET ASSY (with 13,36-39)
36	ROLL OCT UPPER
37	ROLL PINCH OCT
38	CHUTE OFFSET
39	SPRING PINCH EXIT
40	TRAY ASSY OCT (with 41-44,53)
41	TRAY EXTENSION
42	TRAY EXIT
43	TRAY BASE
44	SPRING TRAY
45	COVER FRONT
46	HARNESS ASSY OCT MOT (J71-P710)
47	LINK
48	SHAFT FULLSTACK
49	FLAPPER L
50	FLAPPER R
51	- -
52	DAMPER ASSY TRAY L
53	STOPPER
54	DAMPER ASSY TRAY R
55	GEAR 19 OFFSET
56	SPRING CONNECTOR OCT

6 Principles of Operation

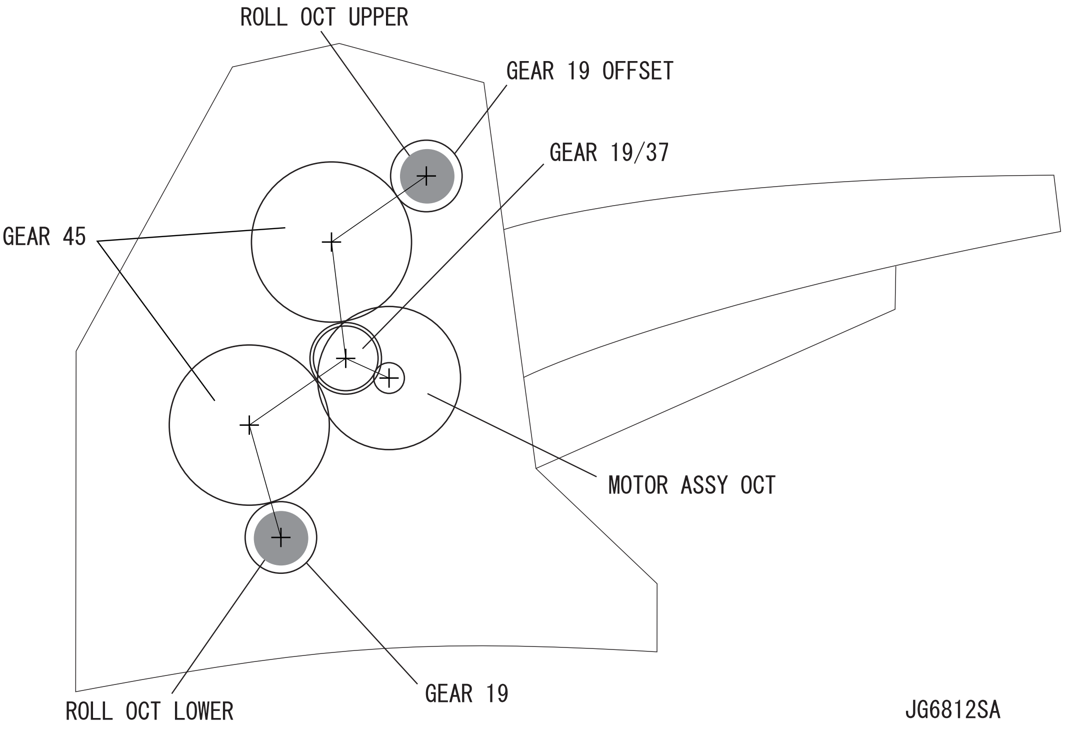
6.1 Driving Force Transmission Path

6.1.1 MOTOR ASSY OCT

The rotating force of the MOTOR ASSY OCT is transmitted via various gears to components that need mechanical driving force as shown in the flow given below.


MOTOR ASSY OCT
GEAR 19/37
GEAR 45
GEAR 45
GEAR 19
GEAR 19 OFFSET
ROLL OCT LOWER
ROLL OCT UPPER
JG6811SA

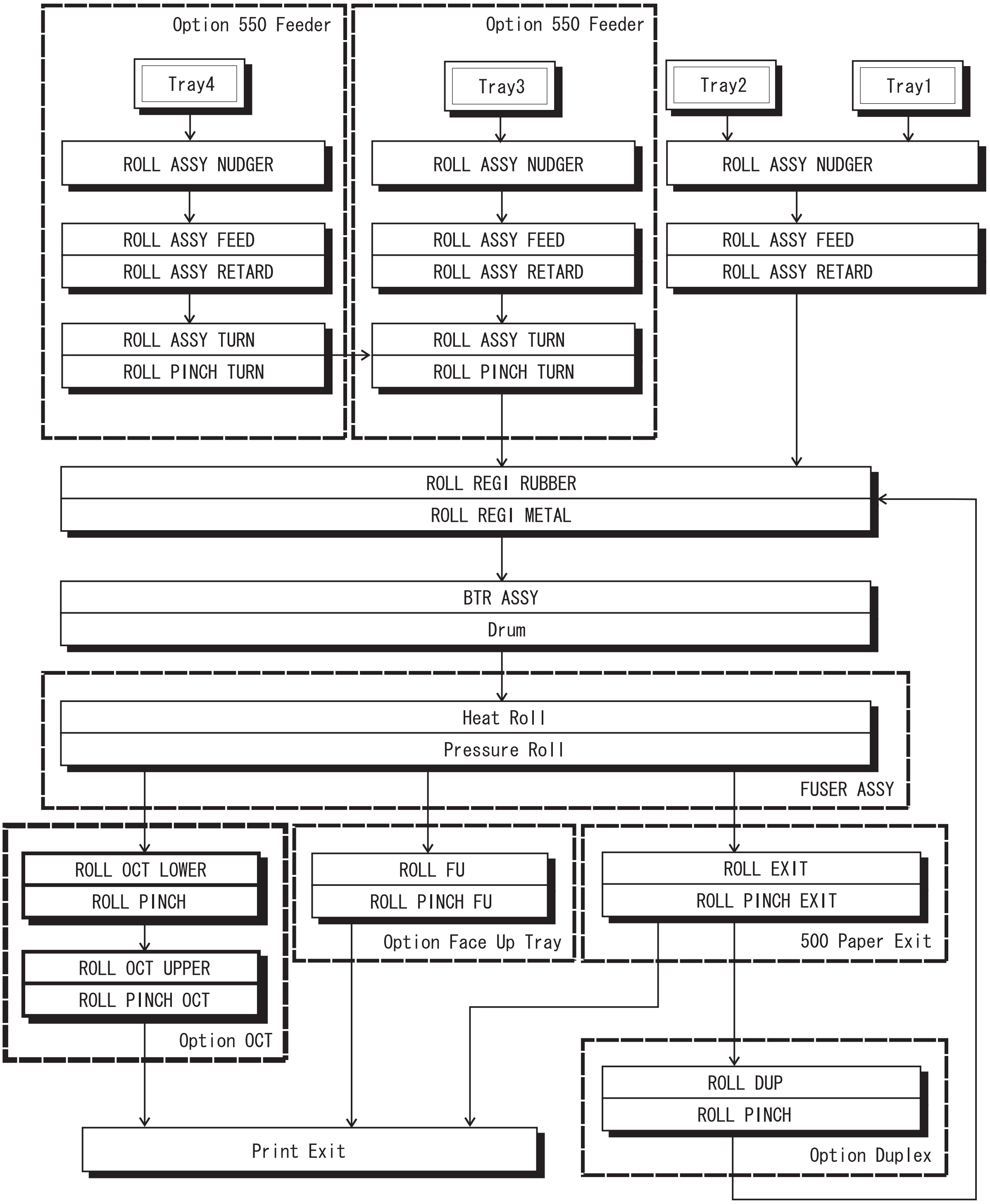
6.1.2 Gear Layout


ROLL OCT UPPER
GEAR 19 OFFSET
GEAR 19/37
GEAR 45
MOTOR ASSY OCT
ROLL OCT LOWER
GEAR 19
JG6812SA

6.2 Paper Transport

6.2.1 Paper Transport Path

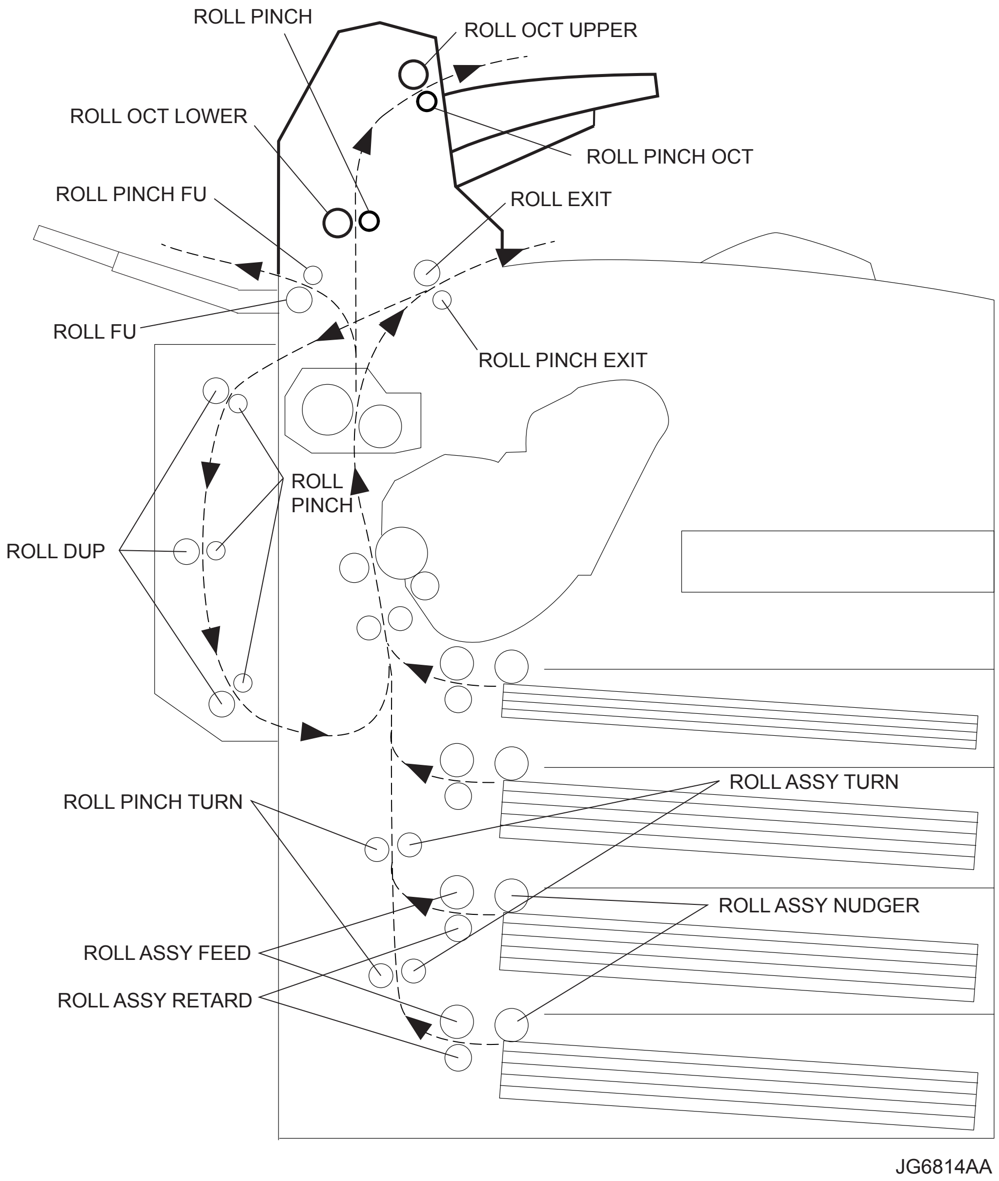
When the Option OCT has been added, the paper is transported in the sequence given below.


Option 550 Feeder
Option 550 Feeder
Tray4
Tray3
Tray2
Tray1
ROLL ASSY NUDGER
ROLL ASSY NUDGER
ROLL ASSY NUDGER
ROLL ASSY FEED
ROLL ASSY RETARD
ROLL ASSY FEED
ROLL ASSY RETARD
ROLL ASSY FEED
ROLL ASSY RETARD
ROLL ASSY TURN
ROLL PINCH TURN
ROLL ASSY TURN
ROLL PINCH TURN
ROLL REGI RUBBER
ROLL REGI METAL
BTR ASSY
Drum
Heat Roll
Pressure Roll
FUSER ASSY
ROLL OCT LOWER
ROLL PINCH
ROLL OCT UPPER
ROLL PINCH OCT
Option OCT
ROLL FU
ROLL PINCH FU
Option Face Up Tray
ROLL EXIT
ROLL PINCH EXIT
500 Paper Exit
ROLL DUP
ROLL PINCH
Option Duplex
Print Exit

JG6813AA

6.2.2 Layout of Paper Transport Path

Main components regarding the transport of the paper when the Option OCT is installed are given below.


ROLL PINCH
ROLL OCT UPPER
ROLL OCT LOWER
ROLL PINCH OCT
ROLL PINCH FU
ROLL EXIT
ROLL FU
ROLL PINCH EXIT
ROLL PINCH
ROLL DUP
ROLL PINCH TURN
ROLL ASSY TURN
ROLL ASSY NUDGER
ROLL ASSY FEED
ROLL ASSY RETARD
JG6814AA

6.3 Actions of Main Functional Components

The Option OCT is available as an optional unit for JIGEN laser printer. Offset output is enabled by mounting this optional unit to the top of the 500 Paper Exit.

MOTOR ASSY OCT

This motor gives the driving force to the ROLL OCT LOWER and ROLL OCT UPPER, which transport the printed paper to the tray of the OCT.

MOTOR ASSY OFFSET

This motor gives the driving force to the CHUTE OFFSET ASSY via the GEAR CAM.

SOLENOID ASSY GATE

This solenoid switches between the paper paths to the standard and OCT paper output trays. When the SOLENOID ASSY GATE operates, the GATE OCT EXIT is operated by the LINK GATE OCT pushed downward against the spindle of the SOLENOID ASSY GATE. Thus, the paper output direction is switched to the OCT paper output tray.

PWBA OCT

A CPU is installed in the PWBA OCT. This CPU receives instructions from HVPS/MCU and information from sensors and switches, and controls the operation for transporting the paper through the OCT.

S/W REAR COVER

This switch detects that the COVER REAR is closed.

SENSOR OCT

This sensor detects the presence or absence of paper in the OCT.

Sensor Full Stack OCT

This sensor is located on the PWBA OCT, and detects that the paper output tray is full, using the ACTUATOR FULL STACK.

Sensor Offset

This sensor is located on the PWBA OCT, and detects an offset operation, using the Actuator in the CHUTE OFFSET.

ROLL OCT LOWER

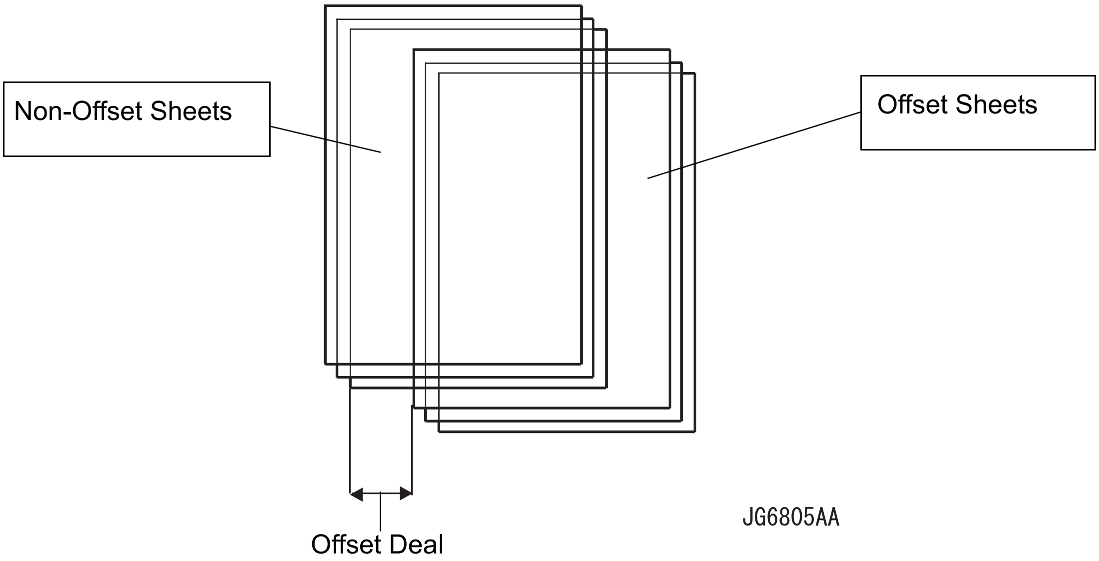
This roll transports the printed paper sent out from the Fuser, to the ROLL UPPER OCT.

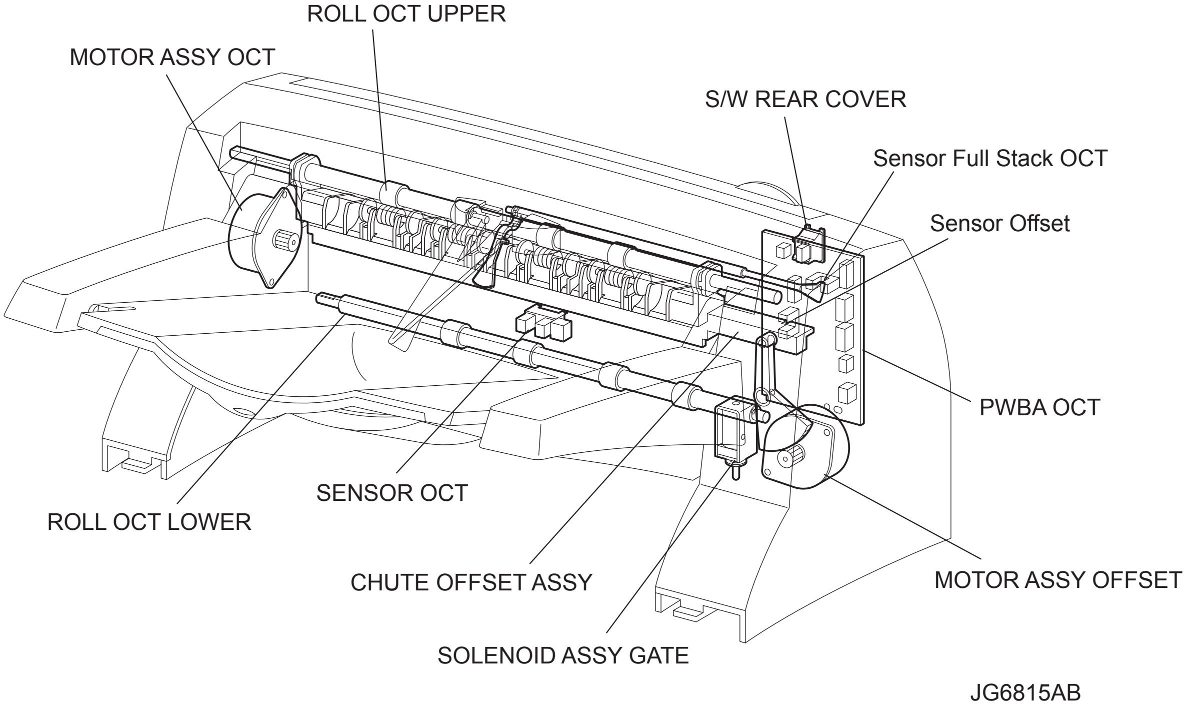
ROLL OCT UPPER

This roll discharges the printed paper sent out from the ROLL OCT LOWER, to the tray of the OCT.

CHUTE OFFSET ASSY

This is driven by the MOTOR ASSY OCT and GEAR CAM. During paper output, it moves right and left to perform offset operation. The standard distance between offset paper and non-offset paper is 25mm. The Offset Deal (the closest distance between a batch of offset sheets and a batch of non-offset sheets) should be more than 10mm.


Non-Offset Sheets
Offset Sheets
Offset Deal
JG6805AA

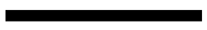
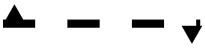
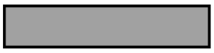
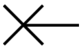
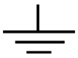
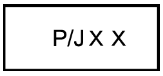
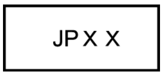
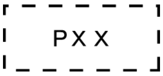
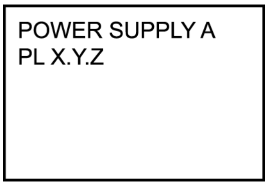
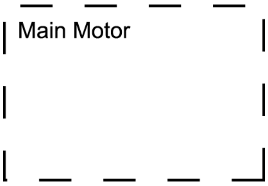
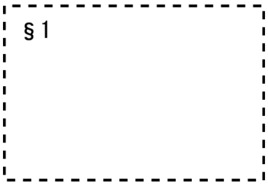
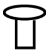

ROLL OCT UPPER
MOTOR ASSY OCT
S/W REAR COVER
Sensor Full Stack OCT
Sensor Offset
PWBA OCT
SENSOR OCT
ROLL OCT LOWER
CHUTE OFFSET ASSY
MOTOR ASSY OFFSET
SOLENOID ASSY GATE
JG6815AB

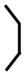
7. Wiring Diagrams and Signal Information

7.1 Connection Wiring Diagram

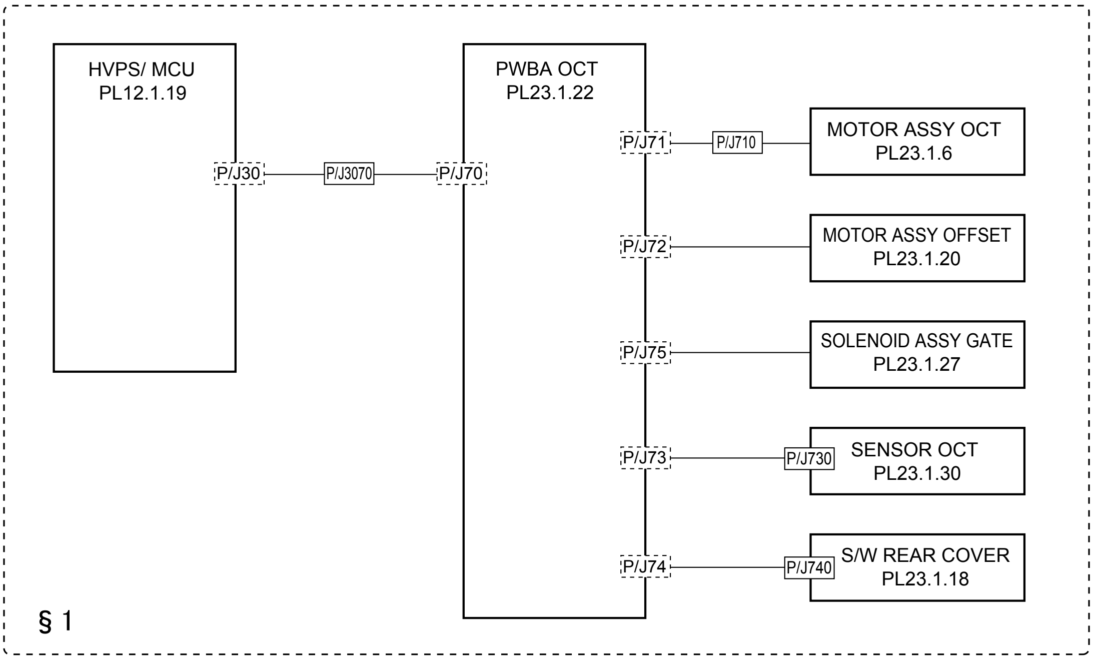
7.1.1 Symbols in the General Connection Wiring Diagram

The symbols in the general connection wiring diagram are described below.

Symbol	Description
	Represents an interconnection between parts using wiring harness or wire.
	Represents an interconnection which differs according to the specifications.
	Represents an interconnection between parts using a conductive member such as a plate spring.
	Represents a connection between parts by tightening of a screw.
	Indicates a frame ground.
	Represents a connector. The connector No. is indicated inside the box.
	Represents a connection terminal with a plate spring on the printed circuit board. The connector (terminal) No. is indicated inside the box.
	Represents a connector directly connected to the printed circuit board. The connector No. is indicated inside the box.
	The box containing a part name represents a part. "PL X.Y.Z" indicates the item "Z" of the plate (PL) "X.Y" described in Chapter 5 "Parts List."
	Represents a functional part within a part, and indicates the name of the functional part.
	Represents a section in "2. Interconnection Wiring Diagram of Parts," and indicates its section No.
	Represents a screw for fixing wiring harness and a conductive member such as a plate spring.

Symbol	Description
	Represents a conductive member such as a plate spring.

7.1.2 General Wiring Diagram


HVPS/ MCU
PL12.1.19
P/J30
P/J3070
P/J70
PWBA OCT
PL23.1.22
P/J71
P/J710
MOTOR ASSY OCT
PL23.1.6
P/J72
MOTOR ASSY OFFSET
PL23.1.20
P/J75
SOLENOID ASSY GATE
PL23.1.27
P/J73
P/J730
SENSOR OCT
PL23.1.30
P/J74
P/J740
S/W REAR COVER
PL23.1.18
§ 1

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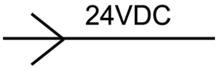
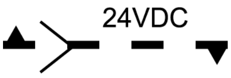
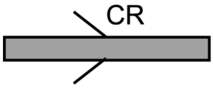
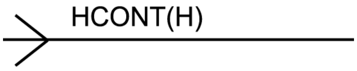
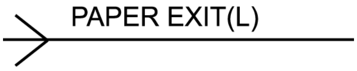
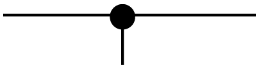
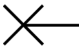
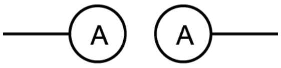
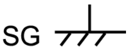
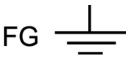
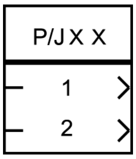
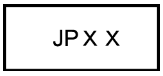
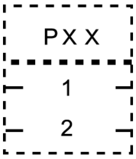
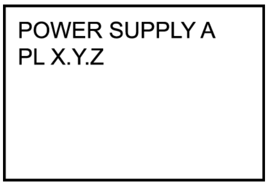
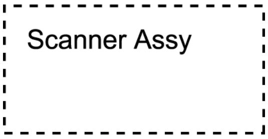
7.2 Interconnection Wiring Diagram of Parts

7.2.1 Instructions for the Use of the Interconnection Wiring Diagram of Parts

The symbols in the interconnection wiring diagram of parts are described below.
Note that the description of general symbols is omitted.

Symbol	Description
	Represents an interconnection between parts using wiring harness or wire, and indicates its signal name/contents. The arrow ">" or "<" on the line represents the direction of the signal.
	Represents an interconnection between parts using wiring harness or wire, which differs according to the specifications, and indicates its signal name/contents. The arrow ">" or "<" on the line represents the direction of the signal.
	Represents a interconnection between parts using a conductive member such as a plate spring, and indicates its signal name/ contents. The arrow ">" or "<" on the line represents the direction of the signal.
	Represents a function and a logical value (High (H) or Low (L)) of a signal when the function is activated. The voltage indicates a value when the signal is High. The arrow indicates the direction of the signal.
	Represents a function and a logical value (High (H) or Low (L)) of a signal when the function is in a detectable state. The voltage indicates a value when the signal is High. The arrow indicates the direction of the signal.
	Represents a connection between lead wires.
	Represents a connection between parts by tightening of a screw.
	Represents a connection between "A" and "A".
24VDC	The DC voltage indicates an approximate value measured when the negative side is connected to a signal ground (SG).
	Indicates a signal ground (SG).
	Indicates a frame ground (FG).
RTN	Indicates a return.

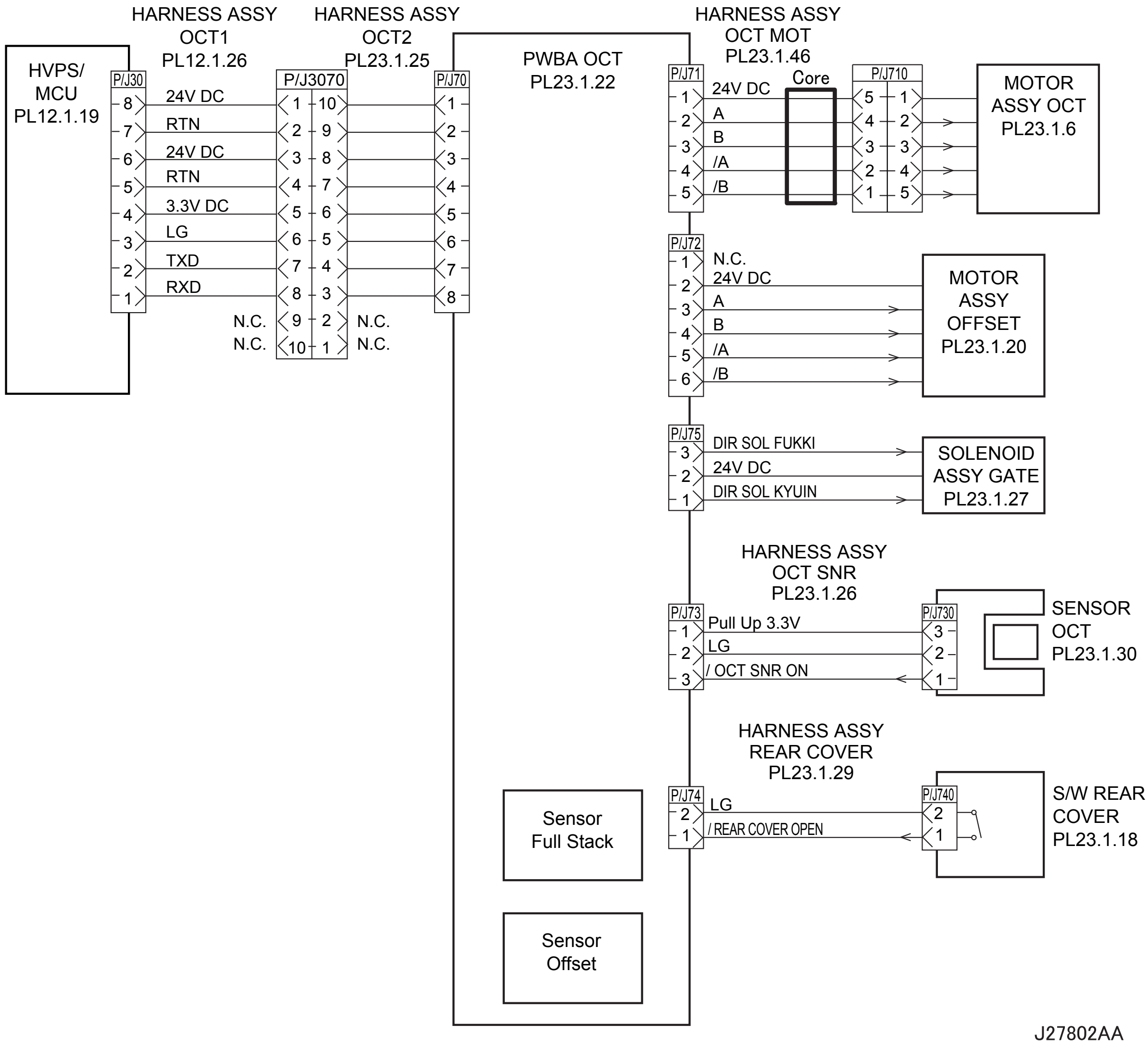
Symbol	Description
	Represents a connector. The connector and PIN Nos. are shown at the upper and lower parts respectively. "P,-" indicates the plug side of the connector. "J,>" indicates the jack side of the connector.
	Represents a connection terminal with a plate spring on the printed circuit board. The connector No. is indicated inside the box.
	Represents a connector directly connected to the printed circuit board. The connector No. is indicated inside the box.
	Represents a part. "PL X.Y.Z" indicates the item "Z" of the plate (PL) "X.Y" described in Chapter 5 "Parts List."
	Represents a functional part within a part, and indicates the name of the functional part.
◆	Indicates a reference item associated with the section.

7.2.2 Configuration of the Interconnection Wiring Diagram of Parts

§ 1 Option OCT

Connections of HVPS/MCU with PWBA OCT
Connections of PWBA OCT with MOTOR ASSY OCT
Connections of PWBA OCT with MOTOR ASSY OFFSET
Connections of PWBA OCT with SOLENOID ASSY GATE
Connections of PWBA OCT with SENSOR OCT
Connections of PWBA OCT with S/W REAR COVER

§ 1 Option OCT


HVPS/
MCU
PL12.1.19
HARNESS ASSY
OCT1
PL12.1.26
HARNESS ASSY
OCT2
PL23.1.25
P/J30
P/J3070
P/J70
24V DC
RTN
24V DC
RTN
3.3V DC
LG
TXD
RXD
N.C.
N.C.
N.C.
N.C.
PWBA OCT
PL23.1.22
HARNESS ASSY
OCT MOT
PL23.1.46
P/J71
Core
P/J710
24V DC
A
B
/A
/B
MOTOR
ASSY OCT
PL23.1.6
P/J72
N.C.
24V DC
A
B
/A
/B
MOTOR
ASSY
OFFSET
PL23.1.20
P/J75
DIR SOL FUKKI
24V DC
DIR SOL KYUIN
SOLENOID
ASSY GATE
PL23.1.27
HARNESS ASSY
OCT SNR
PL23.1.26
P/J73
P/J730
Pull Up 3.3V
LG
/ OCT SNR ON
SENSOR
OCT
PL23.1.30
HARNESS ASSY
REAR COVER
PL23.1.29
P/J74
P/J740
LG
/ REAR COVER OPEN
S/W REAR
COVER
PL23.1.18
Sensor
Full Stack
Sensor
Offset
J27802AA

Signal line name	Description
A and B	Excitation signal for MOTOR ASSY OCT and MOTOR ASSY OFFSET. Phases A and B.
/A and /B	Excitation signal for MOTOR ASSY OCT and MOTOR ASSY OFFSET. Phases /A and /B.
DIR SOL FUKKI DIR SOL KYUIN	Control signal for SOLENOID ASSY GATE.
/OCT SNR ON	Signal from SENSOR DUP. This signal goes Low when light is received.
/REAR COVER OPEN	Signal from S/W REAR COVER. This signal goes Low when the rear cover of OCT (COVER REAR) is closed.

8. Specifications

8.1 Machine Structure

8.1.1 Fundamental Structure

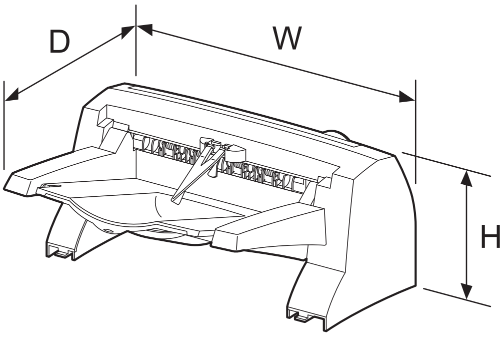
Option OCT is used attaching in the upper part of the main part of a printer

8.2 Mechanical Characteristics

8.2.1 Dimensions/Mass of the Main Body

The dimensions are specified under the same posture as installed in the machine. Partial protrusions are not included.

Width (W):	417.8 mm
Depth (D):	312.5 mm(382.5 mm when extended)
Height (H):	226.4 mm
Mass:	2.5 kg



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8.2.2 Output Characteristics

Paper Output Method

Paper can be output by the following methods:

- Face-down output
  Paper is output onto the top tray of the machine with the printed surface downward.

Paper Output Capacity

NOTE **The following is specified for paper immediately after taken out of its package at an environment temperature/humidity of 22°C/55-60%RH.**

Paper	Number of sheets the paper output section holds
FUJI XEROX P Paper A4 SEF	500 sheets
4200 20lb Letter SEF	500 sheets
RX 80 A4 (3R91720) SEF	500sheets

Supported paper size

Width:	88.9 mm to 215.9 mm
Length:	139.7 mm to 355.6 mm